Return To

Edward J Brennan

Secretary

53 State Street

Room 546

EYE INFIRMARY.

A MEETING of Gentlemen was held at the Exchange Coffee House, on Thursday Evening, December 29th, 1825, to take into consideration the expediency of establishing an Institution in this City, for the relief of the poorer classes afflicted with Diseases of the Eye:

The Hon. JOHN WELLES was chosen Chairman, and JAMES C. MERRILL, Secretary.

The following Report of the Surgeons was then read.

THE object of the Institution, founded in this City on the 1st of October, 1824, under the title of the Boston Eye Infirmary, to whose history and progress we are desirous of inviting your attention, was a treatment of the Diseases of the Eye among the Poor, a class of our citizens, from their various habits, occupations, privations and exposures, peculiarly subject to the diseases of this important organ.

We were induced to engage in the undertaking from a conviction (the result of a very extensive observation of these Diseases during a period of six years) that there is, annually, a great amount of serious suffering among the Poor, from this cause; suffering for which no efficient provision has been made, and which thus far, from ignorance of its existence, on the part of the public, has not received that sympathy and aid, which its extent demands; and from a belief that the Establishment of a Public Eye Infirmary, upon a proper foundation, was much needed, and would prove an invaluable blessing to the poor, and an important acquisition to our city.

Persons unacquainted with this subject, can form no adequate idea of the wretchedness to which the Poor are reduced, when they become the subjects of Diseases of the Eye. To those in the enjoyment of affluence or competency, they are sufficiently distressing. But when, to the obvious evils of these Diseases are added the miseries of want, they constitute affliction which calls loudly for the sympathy of every benevolent heart. The moment a person whose subsistence depends upon the daily labour of his hands, becomes afflicted with any of the acute Diseases of the Eye, his labours must be suspended and his support cease, and if he is not soon relieved, so exquisitely

delicate is the structure of the organ, that a change of texture is easily induced, fatal to vision, and it necessarily follows that the sufferer, and those dependent upon his exertions, must have all the evils of poverty added to the misfortune of disease. All our Public Asylums afford many unfortunate examples of this fact; examples of individuals, and not unfrequently whole families dependent upon them, who might have subsisted independently and respectably upon the fruits of their industry, compelled, by the long continuance, or the fatal consequences of these diseases, from mismanagement or neglect, to throw themselves upon the public bounty for support. But it is not the acute Diseases of the Eye alone, which, unless properly and promptly treated, terminating in changes of the organ, fatal to vision, are attended with these unhappy consequences. There are many, which not violent or immediately dangerous, are yet sufficiently annoying and distressing, to incapacitate those suffering under them, from the pursuit of their ordinary avocations, and which compel them, after much suffering, with almost equal certainty, to shelter themselves under the Charity of the Public. Most of these Diseases, if early attended to as they generally are where Public Eye Infirmaries exist, admit of a very easy and rapid cure. "It has been stated (says the Report of the New York Eye Infirmary,) by the Medical Attendant of the Almshouse at Bellevue, that a considerable number of paupers, are annually received and supported there, who have been reduced to the necessity of subsisting on the Public Bounty, by loss of sight induced by Diseases, which might have been cured by attention in the first instance." But, unfortunately, it is not necessary to go so far for examples in proof of our assertion. We have, ourselves, witnessed the same melancholy facts in our own Almshouse; and it will be found, that every Charity of the kind, contains a number of persons who have been compelled to seek shelter under its roof, from the privations induced by unrelieved Diseases of the Eye; and who, had such an institution existed, as that for which we are now seeking the Patronage of the Benevolent, would have now been competent and happy in the pursuit of their various callings.

But the poorest classes of the community; those who suffer thus severely in silence, are not the only persons with whom Diseases of the Eyes prove very distressing, and to whom such an institution would be invaluable. Many of these Diseases, from constitutional and other causes, are of long continuance, and require, though not immediately dangerous to vision, frequent attendance and careful watching, to prevent them from terminating in changes of texture, which as certainly impair vision as the more obviously dangerous and rapid species of Disease. They are very common among an extensive class of our Citizens, our Mechanics, Tradesmen, Females of small incomes, and various individuals whose means enable them to live

independently while in health, but who are unable to procure all the attention which these important Diseases demand, without incurring medical expenses greater than they are able to bear; and from feelings of delicacy on their part, they are often suffered to proceed until very unfortunate effects are occasioned; until vision is much impaired, and sometimes wholly destroyed. It has been our unhappiness to witness many such instances at the Infirmary, and to hear them lament that such an Institution had not existed earlier, where they might have felt at liberty to apply for relief.

In the hope of being able to ascertain the extent of these evils, and, at some future time, of applying an ample remedy for them, we commenced the establishment of the Infirmary. It has now been in operation nearly fifteen months, and though prosecuted in a noiseless manner, has afforded abundant evidence of its utility, not only to a great number of suffering individuals, but to the Public at large. Eight hundred and fifty nine Patients have applied for relief, and we have every reason to believe that this is but a part of those who have suffered, and that many more would have applied, had they been acquainted with the existence of such an Institution. The experience of every day's attendance at the Infirmary has afforded such striking proofs of the importance of our labors, that we feel confident they only need be made known to a benevolent public, to insure that patronage which will place this infant establishment upon such a foundation as will render it more extensively and more permanently useful.

Of this number of applicants, many have been restored to sight from total blindness; and many cured of diseases, which, without the treatment received at the Infirmary, must inevitably have terminated in blindness, partial or complete. One Patient, who was born blind, has received his sight, and been made to rejoice in the pleasures of light and life, who might, otherwise, perhaps (to use the simple but energetic words of its mother, in a letter of acknowledgment to the Surgeons,) "have continued to grope its helpless way through a world of darkness and inactivity." Four Patients have been led to the Infirmary blind, with certificates, from their Physicians, that their Diseases were incurable; and returned home to their friends, enjoying good vision. Hundreds have been entirely relieved of annoying diseases, which, though not dangerous, had deprived them of many of the pleasures of existence; and some have endured them for life, without ever having applied for medical aid, in the belief that they were incurable. We have every week been reminded, by our own experience, of the truth of a remark of the Physician of the New York Eye Infirmary: "often has it happened to the Surgeons of the Institution, (says he,) to see persons with their eyes irrecoverably destroyed by Diseases under which they suffered in their childhood, and children with similar Diseases in a state admitting of an easy cure." If it were necessary to relate our experience more particularly, we might mention cases of a nature so distres-

sing, as to place the necessity of the Institution beyond the possibility of a doubt, in every reflecting mind, and we cannot refrain from relating the two first cases that applied to us, because they confirm, in so striking a manner, the truth of our assertions. One was an active man, about 25 years old, who appeared to be incurably blind. On inquiring into the history of the case, it was ascertained that his present deplorable condition, was the result of mismanagement in a Disease, which might at its commencement have been cured by a single application. The other was a poor girl, whose vision was irretrievably destroyed, the eyes so disorganized and so distended that their natural figure could not be recognised, and so painful, for a long time, that her health had become seriously impaired. She informed us that she was a stranger, that six weeks before, on her arrival into the country, some sand was thrown into her eyes; that she went home, and being poor and friendless, she knew not where to apply for relief, and the inflammation consequent upon the accident, had reduced her to her present deplorable condition. She is now, probably, living in wretchedness among her pennyless friends, or an inmate of some of our public asylums. Had our Infirmary been in existence at the time, and generally known among the poor, the inflammation inducing the blindness and deformity of this unhappy child of want, would have been prevented by a very simple process, and she might now enjoy the blessings of sight, and the capacity of being useful and happy.

There are other circumstances which render Public Eye Infirmaries valuable Institutions wherever they have existed, besides the relief which they afford to the individuals afflicted with the various diseases of the Eye. This organ being compound in its structure, and having an example of every tissue of the body entering into its texture, presents a fair specimen of each variety of disease to which the body is subject; and being the only transparent organ of the body, it affords the best opportunity of witnessing the nature and progress of disordered action, and learning accurately its effects upon diseased parts. Hence, the information derived from the observation of Diseases of the Eye, throws light upon all other Diseases, and on this account, they constitute, independently of the consequence of the organ itself, a very important and interesting branch of medical study and observation.

Notwithstanding these considerations, they have not received that attention from the profession which their importance demands. One of the principal causes of the neglect, has been a want of opportunity of observing a sufficient number of these Diseases which an institution of this kind always brings together, to enable Physicians to make those accurate discriminations which are so absolutely necessary, before they can be managed successfully. Another, is the idea, so prevalent among the community, that they are a class of Diseases which the Profession has never

investigated; which idea has always tended to diminish still more the opportunities for observation in private practice.

The establishment of an infirmany throws open to the Profession a wide field of observation, and affords to Medical Students an opportunity of seeing, in a short time, the great variety af Diseases to which the eye is liable, and soon enables them to discriminate them with accuracy and treat them successfully. It is one of the best practical schools of Surgery, and the Public will eventually derive incalculable benefit from its establishment, as well by the information which it communicates to Medical Men, as by the relief which it affords to many suffering members of the community.

We have thus cursorily explained the motives which induced us to engage in this undertaking; and stated the results, thus far, of our labours in this Infant Institution. We have performed them cheerfully, and found a pleasant recompence for the exertions and expenses attending them, in the important benefit conferred upon many suffering individuals. We have done sufficient to demonstrate its importance—as a powerful agent in relieving human suffering—a valuable auxiliary in the pursuit of Medical Science—and, we think we may add, one instrument, by no means inconsiderable, of aiding public economy. But it requires your fostering care and benevolence to render it more extensively and permanently useful. To that fostering care and benevolence we cheerfully commit it, confident, that, having demonstrated its utility, it cannot, in our charitable community, want friends.

EDWARD REYNOLDS, M. D.
JOHN JEFFRIES, M. D.

Boston December 22, 1825.

Catalogue of Diseases treated at the Boston Eye Infirmary.

Patients received from October 1, 1824, to December, 1825,	856
Remaining under treatment, December, 1825, - -	20
Of this number there have been cured, - - -	718
Relieved, - - - - - - - - - -	36
Incurable, (Eye 30—Ear 27) - - - - -	57
Declined treatment, - - - - - - -	11
Results not ascertained, - - - - - -	14
Remaining under treatment, - - - - - -	20
Total,	856
Chronic Ophthalmia, - - - - - -	38
Rheumatic Ophthalmia, - - - - - -	2
Inflammation of the Conjunctiva Acute, - - -	67
" " with Purulent, disch. (adults,)	11
" " " (infants,) -	10

Strumous Inflammation of the Conjunctiva,	22
" " " with Pustules,	73
Chronic Inf. of Conjunctiva, Granular Lids and Vascula Cornea,	22
Ulcers of the Cornea,	62
Excresences of the Coujunctiva,	1
Opacities of the Cornea,	45
Pterygium,	10
Staphyloma,	6
Iritis,	21
Closure of the Pupil,	2
Cataract,	46
Amaurosis,	33
Strabismus	1
Tinea Ciliaris,	51
Lippitudo,	143
Hordeolum,	4
Inversion of the Eyelids,	12
Eversion of the Eyelids,	4
Tumours of the Eyelids,	30
Abscesses of the Eyelids,	4
Ulcers of the Eyelids,	2
Diseases of the Lachrymal Passages,	54
Wounds and other Injuries of the Eyes,	56
Frœnum of the Eyelids,	3
Paralysis of Eyelids,	1
Irritable Retina,	26
Fungus Hæmatodes,	1
Hypopion,	5
Hemeralopia	7
Myopsia,	2
Glaucoma,	2
Nervous Deafness,	32
Obstruction of the Concha,	14
Obstruction Eustachian Tube,	2
Abscesses in the Concha,	8
Inflammation of Concha,	4
Suppuration of Tympanum,	22
	859

After which, the following Resolutions were offered by Edward H Robbins, Esq., and unanimously adopted.

1. *Resolved*, That, in the opinion of this meeting, a Public Institution, similar to those in London and New York, for curing Diseases of the Eye, has become highly important, and will essentially serve the cause of humanity.

2. *Resolved*, That the Infirmary, whose history and progress have been detailed in a Report read before this meeting, by its Surgeons, be the basis upon which the Institution shall be found-

ed, and that a Committee be appointed to conduct the affairs of the Institution for the present, and to collect subscriptions.

3. *Resolved*, That the terms upon which subscriptions shall be received, be the following, viz.: The subscription and payment of Forty Dollars, or any larger sum, shall constitute the subscriber a member of the Infirmary for life, with the privilege of voting for, and being eligible as Officers of the Institution. That the annual subscription and payment of the sum of Five Dollars, shall constitute the subscriber a member of the Infirmary, with all the privileges of subscribers of Forty Dollars, as long as such subscription shall be paid. That the annual subscription of any sum less than Five Dollars, and not less than One Dollar, shall constitute the subscriber a member of the Infirmary as long as such subscription shall be paid, with the privilege of voting for its officers. All subscriptions to terminate at the pleasure of the subscriber.

4. *Resolved*, That when fifty subscribers have been obtained, or sooner if it be deemed proper by the Committee, public notice be given, and the subscribers be invited to meet and proceed to the election of a Board of Officers.

5. *Resolved*, That the Board of Directors consist of a President, Vice President, Treasurer, and Secretary, and eight Directors, to be chosen annually, and that in addition to those, the Surgeons of the Infirmary shall be, ex-officio, Directors of the Infirmary.

6. *Resolved*, That when the Board of Directors shall have been elected, the duties of the Committee shall cease, and all funds collected by them shall be paid into the hands of the Treasurer, subject to the disposal of the Board.

7. *Resolved*, That the Board of Directors shall have power to form such Constitution and By-Laws for the regulation of the Infirmary, as they shall deem most useful.

8. *Resolved*, That the Committee to conduct the affairs of the Infirmary for the present, and to collect subscriptions, shall consist of eight persons, and that

BRYANT P. TILDEN,
LUCIUS M. SARGENT,
JAMES C. MERRILL,
WILLIAM H. PRESCOTT,
THOMAS W. PHILLIPS,
EDWARD BROOKS,
CHARLES G. LORING, and
CHARLES P. CURTIS, Esquires,

be that Committe.

On motion of Edward Brooks, Esq.

Voted, That the proceedings of this evening, together with the Report of the Surgeons, be published in the newspapers.

JAMES C. MERRILL, *Secretary*.

To the Chairman of the Meeting assembled to take into consideration the expediency of establishing an Institution in this City, for the relief of the poorer classes afflicted with Diseases of the Eye.

Sir: I am deprived, by indisposition, and the unfavorable state of the weather, from assisting in your deliberations, and I have now too short a time to express in writing, the reasons, which would have been urged by me, if present, in favor of such an establishment.

I know of no projected, or proposed establishment, for the relief of the meritorious and industrious poor of this city, which is so unexceptionable, as to its effects on their general habits and character, and so eminently and extensively useful, as the one now proposed. Certainly no such has been proposed since the institution of the Massachusetts General Hospital.

It is too obvious to need any explanation or an argument, that Diseases of the Eye, (distressing to people of all classes,) are overwhelming and fatal to the laborious poor. They are quite as likely to fall upon the virtuous as upon the vicious; perhaps even more so, from the intensity of their application. The only doubt which occured to me, on hearing of the intended institution, was, whether the General Hospital did not offer an adequate and perfect source of relief.

The fact, that 859 applications had been made in one year and three months, to an unpatronized private benevolent Institution devoted to this Disease, seemed to me, to be a complete reply to my doubts.

There are other reasons of great weight. There can be no doubt that the division of labor, which has produced such astonishing effects, in all branches of mechanic industry, must be still more important in refitting and restoring that infinitely complicated machine, the human body.

Such has been the conviction of the learned world; and for more than fifty years, different parts of our bodies have been delivered to distinct sets of artists, and (it is admitted,) with great success, in the alleviation of the multifold infirmities of our great family. The occulist, in all the great countries of Europe, has had a province of his own, and one of sufficient dignity and importance, in guarding from injury and destruction, one of our most important organs

For these reasons, as well as for the very encouraging facts stated by the Surgeons, who have instituted the experiment, I should hope, that a fair and perfect trial would be made of the separation of this branch of surgical art, from all the others, and of affording to the poor, the benefits of such an institution without price.

The example of New York, might have some influence upon us, if in the cause of philanthropy and christian charity, Boston could require the influence of any example.

I beg this may not be viewed in the light of obtruding my opinions on a public meeting, but as a simple and very imperfect exercise of an undoubted privilege of which indisposition has deprived me.

Very respectfully,

Your obedient servant,

JOHN LOWELL.

It had been my full purpose, till within half an hour, to attend the meeting, but I see no good reason, why I should not be permitted, (if not a *voice*,) at least an opportunity of expressing uch sentiments as occur on the subject.



MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

CHARLES STREET. ERECTED, 1850.

AN

ADDRESS

AT THE

DEDICATION OF THE NEW BUILDING,

OF THE

Massachusetts Eye and Ear Infirmary,

JULY 3, 1850.

BY

EDWARD REYNOLDS, M.D.

BOSTON:
CHARLES C. P. MOODY, PRINTER,
Old Dickinson Office, 52 Washington Street.
1850.

Boston, July 3, 1850.

Edward Reynolds, M.D.

Dear Sir, — In compliance with the request of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, you have given an Address to the public, on the occasion of the Dedication of the new building to its charitable use.

Containing, as it does, a very interesting account of the rise and progress of the Infirmary, hitherto very little known in the community, notwithstanding the great benefits that have been conferred by it upon a large class of the poor; and believing that the publication of your eloquent and appropriate Address will tend essentially to extend a knowledge of the Institution, and promote its benevolent purposes, the subscribers were appointed a committee, to request a copy of it for publication.

With great pleasure we communicate to you the request, not doubting that you will accede to their wishes.

Very Respectfully,

ROBERT G. SHAW,
MOSES GRANT,
JAMES LAWRENCE,
} Committee.

Boston, July 8, 1850.

Gentlemen, —

I send you a copy of the Address delivered at the Dedication of the Massachusetts Charitable Eye and Ear Infirmary, which you have done me the honor to request for publication. Hoping that it may, as you have suggested, subserve the interests of the Institution,

I am, Very truly,

Your Friend and Servant,

EDWARD REYNOLDS.

ADDRESS.

To the Patrons of the Infirmary:

We are assembled in this beautiful structure erected by the wisdom and persevering energy of the Managers of the Mass. Charitable Eye Infirmary. We have invited its friends to enter with us, and to dedicate it by some appropriate services to its benevolent use. It is a grateful task to me, in obedience to their request, to welcome you within its walls; and to congratulate you on the completion of another noble Charity, which through their agency, has arisen to honor and adorn our City; to walk with you about its commodious wards; that you may receive the silent but expressive blessing of the poor and blind, and learn in the true though mute eloquence of these humble individuals, the luxury of doing good.

It is peculiarly grateful to them and to me, to meet on this auspicious occasion, all who have contributed by their wisdom or their generosity to the advancement of our Institution; and to the erection of the building

which we are this day assembled to consecrate; and which is destined to continue a noble monument of their benevolence; and to transmit to unborn generations its healing benefits. It is the child of an early love, about which clusters the memory of many of the pleasing associations, and many of the touching incidents that serve to shed an interest over the retrospect of professional life. To the Surgeons belongs its paternity; — to the kindness of its friends, the fostering care that watched its feeble infancy, guided and protected its promising youth, until in the vigor of a useful manhood, it now stands before you an object of honest pride, affording in a retrospect of the past, the surest pledge of its future usefulness.

There are periods in the history of every individual, and every institution, in which it is wise to pause for a moment, and examine the landmarks that designate its points of progress; that we may gather up a lesson of wisdom from the past, and be stimulated to new exertions for the future. The dedication of this building to the cause of benevolence seems to be one of the landmarks, to which the former friends of the Infirmary have long looked forward with anxious hope; and to which its future friends will look back with interest. I propose to pay the debt now considered due to the Patrons of the Institution, by devoting a portion of this interesting hour to a simple detail of such of the prominent facts of its history, as will best show the motives

that led to its formation; the principles upon which it has been governed; and the results it has produced; and thus to make known the faithfulness with which your designs have been fulfilled; and to enable you best to appreciate the great amount of good already secured by your benevolence; and the unspeakable benefit, which this simple charity is capable in its present matured condition, of conferring upon the cause of science and humanity.

Public Eye Infirmaries, are the Institutions of modern times. There are persons still living, whose eyes beheld the corner stone of the first that was erected. It was laid in the almost universal ignorance of Ophthalmic Science. One of the most remarkable facts developed in the history of Medicine, is the utter neglect of the study of Diseases of the Eyes, during the long period of two thousand years — from the days of Celsus who flourished in the reign of Augustus Cæsar, almost to our time. While every other branch of medicine, enlarged its boundaries by the accurate observation of each succeeding age, this alone remained stationary. The medical profession, always true to itself, has kept an equal progress with the other sciences; and successively given in its own character a faithful representation of the wisdom with which it was associated. As we travel down the successive periods of the world's existence, we confidently look to the medical fathers for a progressively increasing light; and except in this single branch of

science we never look in vain. But here no response is given. The Eye, the noblest and most beautiful organ of the body, through which the mind receives its chief stores of knowledge, and many of its purest streams of joy — and by the aid of which are carried on all the avocations that contribute to the happiness and improvement of society — seems to have been the only part, abandoned to an almost total neglect. This profound ignorance hardly disturbed through a long series of ages, and extending back to a period anterior to the Christian era, is to us who are so able to appreciate the suffering and poverty consequent upon the uncured diseases of the eye, almost inconceivable.

But such is the fact. The union of Opthalmology to Medicine, and its elevation to the rank of a Science, is the work of our day. The Romans received it rude and imperfect from the Greeks; the Greeks from the Egyptians; and Egyptian Opthalmology, to which probably very little had been added by either Greek or Roman, was the poor legacy to all subsequent ages, until the latter part of the 18th century; when the Germans made the first effort, by concentrating upon it the light of Physiology and Pathology, to rescue it from its degraded condition; and to elevate it to a rank which rendered it a blessing to mankind. It is painful to look back in imagination, and contemplate the amount of misery entailed on every generation by the annoying affections of this little organ now so easily relieved; and to behold

the multitude of blind ones, now so readily restored to sight, who must then have wandered about in helpless beggary and want. The medical historian is able to comprehend the feelings of the Jew, when he exclaimed in wonder, "Since the world began, was it not *heard* that any man opened the eyes of one born blind." *He* finds no difficulty in believing that no mere human power performed that act of kindness; or in admitting the truthfulness of its narrator. In the exclamation of that humble man, he sees the low condition of a science, which in our day, has become the rare blessing of the race; and is able to estimate the debt of gratitude laid upon the friends of humanity, by your benevolent efforts in rearing this edifice.

The eighteenth century was passing away before the light of science began to break in upon this universal darkness. Here and there an individual occasionally appeared, who added some slight improvement to the art. But the ignorance and indifference of Physicians to the subject, had permitted the diseases of the eyes to fall almost exclusively into the hands of a class of men calling themselves Oculists; men, wholly ignorant of Anatomy, Physiology and Pathology; who were valued only for a certain amount of manual dexterity in the few cases requiring mechanical remedies; and for the local treatment, which formed the narrow and unimportant limits of their knowledge; men, unfitted by nature or education for the treatment of any disease; who

left the science as they found it; in a state of almost total darkness; and rendered the term *Oculist* a bye word and a reproach among Physicians to the present day.

It was not until men eminent for knowledge, and familiar with every department of medical science, took the subject in hand; such men as Richter and Barth, and Beer in Germany; and Saunders, Farre and Lawrence in England; men of general and comprehensive views; who laid the whole field of medicine under contribution, for the principles which were to guide them in learning the nature and treatment of eye diseases, that the Profession were ready to receive this neglected and much abused branch under its protection; and that the oculists who had never contributed anything to its elevation, were compelled to abandon it. The gentlemen who have been appointed, ever since, to the management of Institutions for Diseases of the Eyes, have been selected for their attainments in all branches of medical science. It is the law of all these establishments in Europe, that none other are admissible to office. And since the Physician and Surgeon are alone fitted for the comprehensive views required for the treatment of Opthalmic disease, we are glad that the term *oculist*, is fast passing away with the generations that employed the men who bore it.

With these observations upon the general nature of this subject, we are better prepared to comprehend the

importance of the Eye Infirmary. I begin by saying that Austria has the honor of making the first effort to rescue Opthalmic Surgery from its degraded condition; and of conferring the unspeakable blessing of an improved state of the science upon the world; when in 1773, under the supervision of one of her most eminent physicians, she opened the first school of instruction to pupils; and devoted two wards of the Vienna hospital to the reception of patients afflicted with diseases of the eyes. At this infant establishment, the first light of science broke in upon the profession. There, the medical student first discovered the value of the eye as a beautiful mirror, where from its transparency, he could best learn, because the only one in which he could clearly see, the progress of morbid action. In the beautiful thought of Latham, "It is the organ where he can see all diseases in miniature; and from its peculiar structure, see them as through a glass; and learn many of the little wonderful details in the nature of morbid processes, which but for the observation of them in the eye, he could never have learnt at all." It was at that little Eye Infirmary that hope first began to dawn upon the sorrows of blindness. It was there that a fountain was first opened, which flowing on in new and ever widening streams, has carried light and happiness to thousands in its course.

A long time, however, was destined to elapse before the example of Austria was followed in other countries.

The universal war in which the ambition of Napoleon involved the European nations, greatly retarded the progress of Opthalmic Surgery, and kept it within the narrow limits where it began. Thirty years slowly rolled away, before it reached England; and it was ten years later before America received the blessing.

It was not until the year 1804, that the first impulse to the scientific study of the diseases of the eyes was given in England, by the establishment of the London Eye Infirmary, by Dr. Saunders, who brought the ripe fruits of an admirably constituted, and a highly cultivated mind to the study of this hitherto neglected branch. Although he died too early to fulfil all the bright promises excited by the beautiful discoveries soon made at the Institution, he did much towards redeeming the pledge with which he entered upon its duties. Before he went to his reward, this branch of Pathology was adopted as the favorite child of the Profession; and he had opened a closed path, since trodden by many faithful followers; who, while reaping in it invaluable professional knowledge for themselves, have made the hearts of a great multitude of fellow beings leap for joy, through the restoration of a faculty, without which, life is oftentimes hardly a blessing.

In 1810, the London Eye Infirmary was first thrown open to medical pupils; and soon became an object of great interest to a large number who were preparing themselves in that city, for the medical and surgical

professions — to a few, with the intention of pursuing the study of Opthalmic disease as a speciality ; but to far the greater number, as the neutral ground, where Surgeons and Physicians might both meet, to study the principles of Pathology, as illustrated by the eye ; and to become acquainted with what is now considered an essential part of general medical education. In 1816, it was my privilege for a few months, to enjoy the same opportunity under the teachings of the distinguished Farre, Lawrence and Travers, all of whom are still living, the bright ornaments of the Profession. They were teachings of the highest order, that could hardly fail to excite a strong interest in the pursuit ; as well from its intrinsic utility in acquiring a knowledge of disease, as its power of proving useful to mankind.

As the London Eye Infirmary owes its origin to the Institution at Vienna, so the Massachusetts Infirmary, where we are this day assembled, must claim its parentage from that. The valuable work of Saunders, published in 1816, and the occasional reports of the Infirmary of which it was the first fruits, began to excite a spirit of inquiry among several eminent individuals in our country. But no general movement was made in its favor until 1821; when the first Eye Infirmary in America was established by Dr. John Kearney Rodgers, and Dr. Edward Delafield, two of the most distinguished physicians and surgeons in New York, who may be called the fathers of American Opthalmology. Filled with the

spirit first received at the London Institution, and finding on their return from Europe a great number of poor people afflicted with diseases of the eyes, they were desirous of extending a similar blessing to their native city. Accordingly, at the request of several of the senior members of the profession, they founded the New York Eye Infirmary, where they have ever since labored with praiseworthy diligence; devoting to its interests a great amount of time, that was with difficulty spared from other professional pursuits; uncheered by any adequate patronage of the public, though 36,000 fellow beings have received the blessing of sight and hearing at their hands; and reaping no other reward than the happiness of doing good.

Two years after, in the latter part of 1824, the example was followed in Boston, and the first effort made, whose noble result we are this day assembled to celebrate. Perhaps, on this occasion, I may be pardoned in saying, that the Massachusetts Charitable Eye Infirmary partly originated in the fact that one of its founders had the happiness of restoring a beloved father* to sight by the operation for cataract. The tender relation in this case of surgeon and patient, becoming extensively known among the small population then composing our community, brought to his observation a large number of Opthalmic patients; and soon revealed the fact, that the poor and laboring classes are peculiarly liable to

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*Edward Reynolds, Esq.

these diseases — a fact now familiar to every one acquainted with the results of these Institutions. Whoever would study the diseases of the eyes, must pass by the houses of the affluent, and enter those of the poor. The great majority of all these cases belong to the humbler ranks of society; and have their prolific parentage in the various privations and sorrows unavoidably consequent upon poverty. The eye though small in bulk, is complicated in structure. It presents a specimen of every texture of which the body is composed ; and consequently of every disease. No organ is found to possess more intimate sympathies with all others than this; or is more prone to feel the result of all causes that tend to produce a derangement of the general system. In the unhealthy locations, and the wretched tenements of the poor ; in the imperfect ventilation to which they are constantly exposed ; in the inappropriate and often insufficient aliment ; the scanty clothing, the neglect, the want of cleanliness, and the thousand privations inseparable from their lot, you have these causes all combined. In these darkened wards through which you are invited to walk this morning, you will see it verified. The sickly hue, and the toil worn features of these poor people are but the results of constitutional derangements thus induced ; and as clearly reveal the inseparable union between the health of the body and the health of the eye, as between poverty and disease. These affections are not the ordinary trial of the woman whom Heaven's

bounty has blessed with competence or wealth; but of the widowed mother, whose needy offspring renders every hour an hour of toil; and the dependent seamstress, whose patient fingers know no repose till the midnight hour. It is the toil worn laborer, whose fatiguing occupations must be continued in the summer's heat, and the winter's cold,— it is the poor foreigner who builds your railroads, and repairs your docks, that seek the aid of this friendly charity. A large proportion of all the accidents to which the eye is liable, is to be found, not in the office of the professional man, or the counting house of the merchant, but in the workshop of the poor but industrious mechanic.

These are the individuals for whom you have erected this charitable Institution. It was of such that He who came down to give sight to the blind once said, "the poor ye shall always have with you." Their number now increased an hundred fold by the tide of immigration crowding our shores with the poor of Europe, was so great twenty-six years ago, as to render it impossible to treat them without a sacrifice of time inconsistent with the pursuit of other and more favorite branches of the Profession. Accordingly, in the month of November 1824, the speaker in conjunction with Dr. John Jeffries, hired a room in Scollay's Buildings; fitted it with such conveniences as their limited means enabled them to procure; and invited the poor, afflicted with diseases of the eye, to come there for gratuitous aid.

After having continued their daily attendance for the period of sixteen months, it was found that during this time, although the population of the city did not exceed 50,000, no less than 886 persons had applied at the rooms; presenting every variety of disease, from the simplest derangements that constituted only an annoyance, seriously interfering with their avocations, to the graver maladies destined to terminate in blindness; or sometimes in the loss of life.

The history of that year's labor, with a simple detail of the condition, ages, character and circumstances of the patients, and the results of treatment, forms a perfect example of the annual result of every similar establishment. There, the unwilling occupant of the poor house recovered from disease, which for years had consigned him and his family to its comfortless abode; and revealed its salutary influence upon the community by his first subsequent act — the removal of his children from the almshouse; and a return to the true independence of honest labor for their support. For more than ten years, he annually visited the rooms, to express the grateful emotion, which all that time had not obliterated from his memory. There, the infant of eighteen months, born blind, opened its eyes upon a mother's face; and the few remaining years of the old man of eighty, to whom the grasshopper was becoming a burthen, were again cheered by the returning light of day. There, the humble artizan, rendered dependant upon the precarious

charity of others, was restored to the fruits of his own honest labor. At these humble rooms, many an anxious mother rejoiced in the restoration of some long afflicted child; the broken down student returned to his books; and the lone female, who knew no other protector than her industry, found relief from the brokenness of heart, caused by the loss of a sense that makes poverty a double calamity. In a word, the blind were made to see; and the deaf to hear; and hundreds were relieved of diseases, which, if not necessarily fatal to vision, were by their annoyance, constantly interfering with the freedom of labor.

Having thus satisfactorily tested the experiment, the surgeons now thought the time had arrived, which authorized them to present the claims of this large class of the poor to the attention of the public. Accordingly, a meeting was called on the 13th of March, 1826, at which the Hon. John Welles presided. The Report was read. Its simple statement of facts impressed all the gentlemen present with a conviction of the usefulness and importance of the Institution; and determined them to give it a more perfect trial as a public charity. In accordance with a vote there passed, a subscription was commenced. By the personal exertions of one gentleman, Mr. Lucius Manlius Sargent, more than two thousand dollars were collected in one week, as a permanent fund; and nearly three hundred dollars in annual subscriptions.

The first meeting of the subscribers who had thus promptly replied to the call of the Committee, was held at the Exchange Coffee House, on the evening of March 26, 1826. Mr. Richard D. Tucker presided. The result of Mr. Sargent's effort being made known by Mr. Bryant P. Tilden, was regarded as a spontaneous expression favorable to the establishment of the Institution. Accordingly, it was then regularly organized under the title of the Boston Eye Infirmary, by the election of a board of officers, composed of the following gentlemen:

EDWARD TUCKERMAN,	*President.*
LUCIUS M. SARGENT,	*Vice President.*
WILLIAM B. REYNOLDS,	*Secretary.*
BRYANT P. TILDEN,	*Treasurer.*
RICHARD A. TUCKER,	*Managers.*
EDWARD H. ROBINS,	
ROBERT G. SHAW,	
HENRY SARGENT,	
HENRY RICE,	
NATHANIEL G. SNELLING,	
JAMES C. DUNN,	
THOMAS C. AMORY,	
Rev. JOHN CODMAN,	

To the faithful guidance of these gentlemen at that period, and of others, who from time to time, have filled the vacancies made by death, and other causes; and who with great liberality of time and money, have cherished its interests; it is indebted for the firm foundation that gives it its present promise of permanent usefulness.

In February of that year it became incorporated by the legislature of the commonwealth, under the title of the Massachusetts Charitable Eye and Ear Infirmary. By the vote of the managers, its location was continued in Scollay's buildings until the 6th of May, when it was removed to more commodious apartments at the corner of Court and Tremont Streets. At the expiration of six years, it again removed to the Salisbury building in Summer Street, where it continued four years longer, until removed to the Gore Mansion House, in Green Street.

The purchase of this house may be considered the necessary result of the new wants of the Infirmary, which at an early period began to be developed, at these rooms ; where the labors of the first ten years of its existence as a public Institution were carried on. Each of these temporary locations, though they afforded ample accommodations for patients afflicted with the lighter forms of disease, who came daily for advice, and were able to return to their homes ; were wholly unfitted for the more dangerous forms that necessarily confined them to their own places of abode. The increased labor thus laid upon the surgeons, by the duty of visiting them at their own houses, and endeavoring to combat disease in combination with all the privations of poverty, soon showed the importance to the interests of both patients and surgeons, of enlarging the boundaries of the Institution ; and providing some convenient habitation,

where they could be sheltered, and provided with good air, proper nourishment, careful nursing, and the other obvious comforts required for the successful treatment of disease.

Nor was this all. It was not the city alone, that supplied this class of patients. The adoption of the Institution by the subscribers, soon extended the knowledge of its existence beyond the limits of the city; and brought a great number of patients to the rooms; not only from the neighboring towns, but from the most distant parts of the State. This influx of strangers, without money and without friends, with no place of abode on their arrival, and no means of procuring one, and who came wholly ignorant of the inability of the Infirmary to provide for their support, was a source of perpetual embarrassment to the surgeons. A large proportion of these cases were of a serious character; some, requiring delicate operations, and several weeks' attendance for their removal; others, having acute affections threatening the function of the organ, unless arrested by appropriate treatment; and some so much aggravated by the journey to the city, as to render a return home impossible. The Records of the Managers' quarterly meetings show the frequency of these calls, in the small sums of money that were set apart from time to time, for such as were the most urgent; but which, as the By-Laws of the Infirmary permitted none to be withdrawn from its permanent fund, were always inadequate

to the demand. The Record, unseen by the human eye, in which is written every deed of kindness, would show, that most of these patients, were supported by the donations of private benevolence, until they became so numerous that even that source failed; and so it went on increasing, until, as appears by the statistical report of a Committee appointed to bring the condition of the Institution before the Legislature in 1835, and 1836, one hundred and fifty-three towns in the State had been represented at the rooms by their sick poor; and that no less than one-third of the annual applicants came from the country.

The frequent occurrence of these facts, had impressed the Managers with the importance of securing some permanent abode for such patients, as early as 1833. It had been a subject of much thought and frequent discussion at every meeting: but from a determination to adhere strictly to their early resolution to keep the Institution under all circumstances, free from pecuniary embarrassment, they never led to any action until June 1836. It then appeared by the Treasurer's accounts, that the funds amounted to sixteen thousand dollars. They accordingly concluded, under the pressing necessities of the Institution, to purchase the Gore Mansion House, which several months previous had been offered to them on terms so liberal, as to be considered equivalent to a valuable donation from the heirs of the late Samuel Parkman; as appears by a vote of thanks entered to that effect on its records, Nov. 3d, 1836.

This purchase exhausted all the resources of the Institution. The managers now believing that a ten years' trial of its results was of a character authorizing them to seek legislative aid, appointed a committee to prepare a petition, and present it to the legislature. The highly favorable report of the joint committee subsequently appointed by the Senate, to investigate its claims, and the noble manner in which the two honorable bodies responded to their appeal, by the generous donation of five thousand dollars for the repairs of the house, and two thousand dollars per annum for the period of five years, was a gratifying evidence of their high estimate of its merit ; and a strong incentive to its future efforts.

To Messrs. Henry H. Childs, Ethan A. Greenwood, Charles Thompson, J. V. C. Smith, and Rufus Saxton, the gentlemen, who on this occasion so kindly befriended its interests, the managers would take this opportunity in behalf of the 3816 poor individuals, who, in the succeeding five years, received its benefits ; to offer the expression of their grateful thanks ; as well as to those who on two successive occasions, came forward to reiterate its claims, and obtain a renewal of the generous grant.

The repairs of the building were hardly finished, when on the evening of June 4th, it came near being destroyed through the wickedness of some midnight incendiary. The progress of the flames were not arrested, until one end of the house and all the out

buildings became their prey. This misfortune delayed the completion of the work, until the 19th of July, 1836; when it was first opened for the reception of patients.

The removal to the Green Street House was a new era in the history of the Institution. With the grant of the legislature — an honored seal of its merit — with adequate accommodations for the homeless of the city and the country — with the increasing facility thus acquired for the successful treatment of disease — and the confidence produced by a temporary relief from pecuniary embarrassment, it entered upon a course of new and more prosperous action. Restricted hitherto by narrow means and inadequate accommodations, its efforts had been wholly expended upon the patients who sought its aid. The surgeons were now desirous of extending its usefulness by making it a school of observation to medical students, to whom its doors were from that time freely thrown open. A course of lectures on the diseases of the eyes, were established by the Directors; and delivered at the Infirmary by Dr. John Jeffries; and subsequently for six successive years at the Tremont Medical School, by Dr. Reynolds; and at a still later period, by Dr. George Bethune. Having been thus rendered a school of surgery, it was visited by a large number of medical pupils; many of whom have since become eminent in this, as in all other branches of medical science. The Institution is proud to number

among those, some who now hold in great honor, the highest places in the gift of the profession. Thus its benefits have been extended far beyond the city of its origin ; until a knowledge of this once neglected branch, through the influence of this and other similar Institutions, has come to be considered, here as in Europe, a necessary branch of medical education ; and produced an amount of good over the whole country, probably far exceeding any direct relief afforded to the patients who have been treated within its walls.

The medical history of the Infirmary, during the sixteen successive years of its location in Green Street, presents nothing materially different in its details from the results of every annual report of the surgeons, except the more satisfactory result of the treatment of disease ; and the great increase of patients, in consequence of the extraordinary immigration, which commencing soon after its occupation, began to crowd our shores with the poor of Europe. The Infirmary was the first Charity to feel its influence. From year to year the applicants for aid went on increasing, until it appears that while in 1836, which was the first year, the number was only 698 ; during the past year, the names of no less than 2004 persons are recorded on the surgeons' report. Since the foundation of the Infirmary, the same record shows the names of more than 25,000 patients, of whom, since the occupation of the Gore House, 1580, have been received as inmates within its walls. The

existence of such an amount of disease in our midst, so obviously incapable of being treated at Hospitals or any other establishment designed for the treatment of general diseases, however similar they may be in the constitutional causes that produce them ; and in the principles on which they are to be treated ; presents a most unanswerable proof, not only of the utility, but of the necessity of such an Institution in every crowded capital.

The records of the Institution during the last ten years, afford an almost startling proof of the truth of this assertion. From 1836 to 1841, the rooms of the new Infirmary provided a sufficient accommodation for all persons who applied for admission as House patients. In 1841, their numbers began to increase, and went on advancing in a progressive ratio, until, as appears by the annual reports, in 1845 they were more than doubled, and 1848 and 1849, they were nearly trebled. The house, originally considered large enough for all its future demands, had thus become too small for the accommodation of the vast crowd that now sought its shelter. Not originally intended for its present purpose, it was inconvenient in its domestic arrangements ; deficient in the spaces allotted to the patients ; and to its attendants, medical and domestic ; and unprovided with all the modern contrivances demanded for the successful treatment of disease. Once more, as in the early periods of the institution, it was frequently compelled, for want of room, to shut its doors upon many who sought and

needed its shelter; and once more the managers were forced to take some decisive measures to procure a situation better adapted to its new and increasing wants. After much deliberation, they determined to erect a building, which by embracing every necessary arrangement, should be as permanent as the future history of the Institution might require.

In the hope of procuring the necessary funds, the managers once more sought the aid of the legislature; who again expressed their confidence in the Infirmary, by the liberal donation of fifteen thousand dollars, on condition that ten thousand dollars should be raised from other sources. To this grant, they afterwards added, in May 1850, another of five thousand dollars. In addition to this, the President of the Infirmary, Mr. Robert G. Shaw, whose zealous interest in its welfare is recorded in all its acts for the long period of twenty-four years, in which he has been one of its officers, offered the generous donation of five thousand dollars, on condition that fifteen thousand dollars should be raised from other sources, exclusive of the $15,000 granted by the legislature.

The ready manner in which the community responded to both these calls, by subscribing the above sums, best shows the gradual but certain progress of the Infirmary to public favor through the healing influence of its salutary labor.

The necessary funds thus obtained through the be-

nevolent donations of the State, and private individuals of the city, the lot of land on which this building now stands was purchased May 17, 1848; a building Committee was appointed on the same day, consisting of Messrs. Robert G. Shaw, I. W. Edwards, and Samuel Hooper, who immediately commenced the duty imposed upon them; selected the talented Mr. Edward Cabot as its architect, and Mr. Jonathan Preston, as its builder, and gave to the work their undivided attention, and the fruits of ther wise experience, until May 7th, 1850, when it was finished, and ready for the reception of patients; and where we trust it will ever remain, an honor to the gentlemen by whose wisdom it was erected, and a blessing to the poor of our State and city.

The fiscal, like the medical history of the Infirmary, is a subject worthy of a moment's notice, as an illustration of the character and results of the Institution. Commencing in 1826, with the small fund of $2,700, and $300 in annual subscriptions, the property gradually accumulated, without any especial effort on the part of the managers, until in 1836, it amounted to $16,000; in 1838, to $31,079; in 1842, to $33,476; in 1844, to $38,283; in 1845, to $43,379; and in 1846, to more than $50,000; since which period, by the liberality of the legislature, and the citizens of Boston, in answer to the appeal above mentioned, it has still further increased, till it now amounts to $97,286. Of this sum, $70,000 is invested in real estate, leaving a

balance only of $27,286 in available funds. And yet from the year 1829, no appeal in behalf of the funds has ever been made to the public. With the exception of the sums presented by the State and city for the new building, all its funds have flowed to it in the form of voluntary donations from private individuals. On one occasion only in 1828, the annual report of the surgeons containing a detail of its medical results, awakened a strong interest in its behalf; and led to the appointment of a committee to investigate its condition and claims, and to devise some measures to promote its benevolent ends.

The forcible appeal of that Committee,* whose names were a sufficient guarantee of the merit of its claims, was not immediately productive of any assistance; although of great utility in extending information in regard to the Infirmary, till then almost unknown; and awakening a sympathy in many minds in its favor. From that time, its finances began to improve; and every new want was followed by a corresponding supply; not from any appeal to the public, but from the simple offerings of private charity. In the noiseless pursuit of its work of kindness, a voice was heard. It was the grateful voice of the poor man. It came not to the

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* Edward Tuckerman, Esq., Rev. Joseph Tuckerman, Rev. Lyman Beecher, Rev. Daniel Sharp, Rev. Charles Lowell, Rev. Ezra S. Gannett, Benjamin D. Green, Esq., William B. Reynolds, Esq.

busy community ; but it reached the ear of the poor man's friend. The noble legacy of ten thousand dollars, by Mr. William Payne, was from the recollection, while dying in a foreign land, of a poor dependant, whom he had formerly confided to its care. The five thousand dollars, bequeathed by Mr. John Parker, was the tribute of a generous emotion for the relief of a servant to whom he was attached. The six thousand dollars, willed in the same year by Mr. Daniel Waldo, was the gift of a heart warmed by what his own eyes had seen of an Institution founded on the wants of the poor. The ten thousand dollars, given by Mr. John Broomfield, treasured in long self-denial, was the gift of the poor man's friend, to the Institution, which, in his wisdom, could best befriend him. The same is true of the valuable legacies of Mr. Todd ; the venerable Jeremy Belknap, and his two sisters ; and of Mrs. Benjamin Joy, all of whom remembered the poor in their dying hour ; and of Mr. Samuel Appleton, whose whole life has been a blessing to the poor. And so of the lamented Gossler, the stranger beloved in our midst ; who in his honored walk with the rich, forgot not the poor ; and who, in confiding their interests to the wisdom of his friends, Messrs. Joseph Iasigi and Nathaniel Thayer, as they were watching with the devotion of friendship about his dying bed, best subserved them, through this benevolent Institution. These instances, with one exception, are recounted in memory of the dead ; but not in forgetfulness of the many still living,

whose names are inscribed among the contributors; or of that lady, who, in the evening hour, left a thousand dollars in a nameless note, at the Treasurer's door. She never permitted *us* to know or record her name; but it is written in heaven. If still among the living, she may perhaps learn that the friends of the Institution will ever cherish the memory of her secret kindness.

By the strict economy uniformly exhibited in the expenditure of these slowly accumulating funds, — always keeping within its means, however limited; and never unable to meet its just demands; the Institution, if never rich, has never been poor. In 1827, the annual expenditure was only $473 for the relief of 645 patients. In 1849, it did not exceed $2483 for the treatment of more than 2000 patients. From these two extremes of its first and last year, may be seen the striking disproportion exhibited in every year, between the amount of professional benefit conferred by the Infirmary, and its pecuniary expenditure; and from its present prosperous condition, the wisdom of the early decision of the managers, to preserve it under all circumstances, free from debt. No other charity is capable of effecting the same amount of good, with so small an amount of means. Its whole history has been a singular example of rigid economy and enlarged liberality. During the whole period of its existence, its doors have never been closed upon any applicant, whom it was able to receive; and its last dollar expended for their

benefit. In the freeness of its charity, with constantly accumulating means, it has never gathered a surplus fund; and in the steadiness of its economy, it has always been able to meet every just demand. In its present elevated position, with its increased capacity of doing good, it is poorer than at any previous time; more capable of fulfilling the noble work of charity than perhaps any other Institution, it is still itself supported by charity.

Such are the few facts constituting the short history of the Massachusetts Charitable Eye Infirmary — presented as they stand on its records; and purposely left to tell their own tale of mercy. In full faith we commend it to your continued sympathy and care.

I will not close without reminding its benefactors of the faithful labors, and the wise discretion of the gentlemen to whom they have for so many years confided its welfare: who have watched its feeble infancy with paternal care; and guided the long period of its slow growth, with so much wisdom; maintaining an unwavering faith under all its discouragements; and persevering in unabated effort, until the noble object of their solicitude has attained a vigorous growth, that gives it this day the promise of enduring usefulness.

I shall be pardoned for a passing allusion to its medical officers — to Dr. John Jeffries, one of its founders, who separated himself from it in 1841, after a faithful service of fifteen years; with the gratitude of thousands,

who had been soothed by his kindness, and relieved by his skill. And to Dr. Robert W. Hooper, and Dr. George A. Bethune, who have also served its interests with great fidelity, from 1835 to the present time ; often at the expense of their own professional advancement ; and reaping no other reward than the promotion of science, and the relief of human suffering.

Nor should I be true to the spontaneous feelings of my heart, were I to pass over in silence, another,* who, as the matron of this Establishment, has for many years, with great self-denial, and abounding toil, manifested a wisdom in action ; a patience in trial ; and a kindness of manner, that has rendered her influence second to none in the promotion of its benevolent ends. The Surgeons and Managers, the only witnesses of her untiring devotion to the welfare of the thousands who in this humble Charity, have been the objects of her care ; of the sound judgment manifested under the peculiar trials inseparable from the situation ; of her gentleness and firmness to the worthy and the unworthy ; and of the Christian spirit always brought to her difficult task, will bear witness to her merit. The world will know little of the many trials, or the noiseless triumphs of her lot. But if the cup of cold water given in kindness is not to be forgotten, she will receive her reward.

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* Mrs. Mary Homer.

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JAMES LAWRENCE, Secretary.
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MOSES GRANT,
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Committee of Barnstable Celebration, from their surplus collection,	88
Thomas G. Cary,	25
George B. Cary.	30
Henry Cabot,	50
Jonathan Chapman,	50
Henry Codman,	50
Edward Codman,	50
Jonas Chickering,	100
Mrs. Samuel Dexter,	20
James C. Dunn,	100
Mrs. Davenport,	10
Peter R. Dalton,	50
James Davis, Jr.,	100
Henry Edwards,	100
J. W. Edmands,	275
A Friend,	20
A Friend,	100
A Friend,	50
John C. Gray,	500
Ozias Goodwin,	150
Mrs. E. C. Greene,	250
Francis C. Gray,	400
Horace Gray,	200
Gustavus Gossler,	1,000

Sarah Greene,	300
William Gray,	25
J. S. Copley Greene,	100
John Gardner,	25
Moses Grant,	1.000
Henry Grew,	25
S. Hood,	50
George Hallett,	50
Mrs. S. Hammond, Jr.,	50
George Howe,	200
Henry Hall,	50
Franklin Haven,	100
George O. Hovey,	50
Andrew T. Hall,	25
Augustine Heard,	100
Susan Inches,	20
Iasigi & Goddard,	25
Sarah Jeffries,	50
Mrs. H. Joy,	1,125
Anna P. Jones,	50
Sarah Jackson	600
James Johnson,	100
George B. Jones,	25
George H. Kuhn,	50
William Lawrence,	520
A Lady,	50
George G. Lee,	100
Lawrence & Stone,	200
Abbott Lawrence,	1,100
Amos Lawrence,	100
John Lamson,	50
Minor S. Lincoln,	25
James Lawrence,	100
John A. Lowell,	500
Theodore Lyman, Jr.,	500
Francis C. Lowell,	100
Thomas Lee,	100
Little, Alden & Co.,	25
Lincoln & Reed,	25
Amos A. Lawrence,	100
George Lee,	200
Timothy C. Leeds,	50
Mons. Maeysel, proceeds of exhibition of Automiton,	134
Israel Munson,	3,100
Samuel May,	50
James K. Mills,	150

H. G. Otis,	30
Mrs. Preston,	30
Mrs. Samuel Parkman,	100
John Preston,	50
Jonathan Phillips,	500
William C. Payne,	10,000
John Parker,	5,000
John B. Parker,	50
Sarah P. Pratt,	200
Charles H. Parker,	25
Daniel P. Parker,	50
William P. Perkins,	25
Mrs. Robert Roberts,	350
Henry Rice,	500
Henry B. Rogers,	100
Edward H. Robbins,	100
Robert G. Shaw,	5,300
Francis Stanton,	100
Charles Stoddard,	50
Joshua Sears,	25
Ignatius Sargent,	50
William Sturgis,	1,000
John Simmons,	25
William W. Stone,	100
David Sears,	500
John Tappan,	200
Upham, Appleton & Co.,	25
Thomas B. Wales,	600
Isaac Warren,	300
J. H. Wolcott,	275
E. A. & W. Winchester,	50
Misses Waldo,	400
Daniel Waldo,	6,100
Moses Williams,	100
William F. Whitney,	25
John D. Williams,	250

ACTS AND RESOLVES

CONCERNING THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

INCORPORATED FEB. 23, 1827

TOGETHER WITH THE

BY-LAWS OF THE CORPORATION.

BOSTON:
ALFRED MUDGE & SON, PRINTERS, No. 34 SCHOOL STREET.
1875.

OFFICERS FOR 1875.

PRESIDENT.

EDWARD H. CLARKE.

TREASURER.

J. WILEY EDMANDS.

SECRETARY.

AUGUSTUS LOWELL.

MANAGERS.

J. WILEY EDMANDS.
J. HUNTINGTON WOLCOTT.
AUGUSTUS LOWELL.
R. W. HOOPER.
ISAAC N. STODDARD.
EDWARD H. CLARKE.
B. S. ROTCH.
RUSSELL STURGIS, Jr.
HARVEY JEWELL.
WILLIAM R. ROBESON.
WILLARD P. PHILLIPS.
D. S. CURTIS.
CAUSTEN BROWNE.
F. H. STORY.

OPHTHALMIC SURGEONS.

HASKET DERBY.
F. P. SPRAGUE.
HENRY L. SHAW.
B. JOY JEFFRIES.
ROBERT WILLARD.

AURAL SURGEONS.

CLARENCE J. BLAKE.
HENRY L. SHAW.

SUPERINTENDENT.

A. N. BLODGETT.

FIRST ASSISTANT.

WM. SAWYER DENNETT.

SECOND ASSISTANT.

JONAS CLARKE, Jr.

MICROSCOPIST AND CURATOR OF THE PATHOLOGICAL CABINET.

B. JOY JEFFRIES.

MATRON.

ELIZA M. WHITFORD.

ACTS AND RESOLVES.

CHAPTER 91.

AN ACT TO INCORPORATE THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

SECTION 1. *Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same*, That John Welles, Benjamin Joy, Robert G. Shaw, Samuel H. Walley, Edward Tuckerman, Lucius M. Sargent, Bryant P. Tilden, Edward H. Robbins, Jr., James C. Merrill, and Charles P. Curtis, Esqrs., with Edward Reynolds and John Jeffries, physicians, all of the city of Boston, together with their associates, be, and they are hereby incorporated and made a body politic, for the purpose of gratuitously relieving and curing diseases of the eye and ear, and of enabling poor persons afflicted with such diseases to submit to a course of medical treatment for the same, by the name of "The Massachusetts Charitable Eye and Ear Infirmary," and that they, their associates and successors, shall have perpetual succession by the said name, and shall have power to make by-laws for the preservation and advancement of said institution, not repugnant to the constitution and laws of this Commonwealth.

SECT. 2. *Be it further enacted*, That the said corporation be, and it is hereby authorized and empowered to make, appoint and have a common seal, and is hereby made liable to be sued, and enabled to sue and defend in its corporate capacity, in any of the Courts of record in this Commonwealth; and is herby licensed and empowered to make purchases and

to receive grants, devises and donations of real estate, to the amount not exceeding thirty thousand dollars, and personal estate to an amonnt not exceeding seventy thousand dollars.

Sect. 3. *Be it further enacted*, That the said corporation shall meet at Boston on the last Thursday of October annually, for the purpose of choosing by ballot, twelve managers, a secretary, and a treasurer; and public notice of the time and place of holding such meetings shall be given, once at least, in two of the newspapers published in Boston, seven days before the day of meeting, and votes may at all elections be given in person or by proxy.

Sect. 4. *Be it further enacted*, That the business of said managers shall be to appoint surgeons, and when they deem it expedient, an apothecary of said Infirmary, to provide medicines and surgical instruments, to distribute money among poor patients, to defray expenses of board whilst under treatment, and to regulate all other affairs of the institution; any three of said managers shall constitute a quorum, and all legal instruments which they shall make and execute, shall, when signed by their president or chairman, and sealed with their common seal, bind the said corporation, and be valid in law.

Sect. 5. *Be it further enacted*, That Edward Tuckerman, Esq., be, and is hereby authorized, by public notice in two of the Boston newspapers, to call the first meeting of said corporation at such time and place as he shall judge proper, at which meeting the said corporation shall have all the power vested in them at their stated annual meetings in October, but the officers then chosen shall not continue in office longer than the next meeting in October, unless re-elected.

Sect. 6. *Be it further enacted*, That this act may be amended or repealed at the pleasure of the Legislature. [February 23, 1827.]

CHAPTER 43.

RESOLVE ON THE PETITION OF THE TRUSTEES OF THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Resolved, for reasons set forth in the said petition, that there be allowed and paid out of the treasury of the Commonwealth the sum of two thousand dollars per annum, to the trustees of the Massachusetts Eye and Ear Infirmary, for the term of five years, from the fourteenth day of April next, in aid of the charitable purposes of said Infirmary, and that warrants be drawn accordingly. [March, 1842.]

CHAPTER 145.

RESOLVE ON THE PETITION OF THE MANAGERS OF THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Resolved, for reasons set forth in the petition, that there be allowed and paid out of the treasury of the Commonwealth, in addition to the sums heretofore granted, the sum of five thousand dollars a year to the said managers, for the term of three years, from the first day of April, in the year eighteen hundred and forty-six, in aid of the charitable purposes of the said Infirmary, and that warrants be drawn accordingly: *provided*, *however*, and the above grant is upon the condition, that the said Infirmary shall, within one year from the first day of April, in the year eighteen hundred and forty-six, receive, either from the city of Boston, or some other source or sources, either money or property to the amount and value of ten thousand dollars in further aid of the said charitable purposes. [April 16, 1846.]

CHAPTER 14.

RESOLVE ON THE PETITION OF THE TRUSTEES OF THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Resolved, for reasons set forth in said petition, that there be allowed and paid, out of the treasury of the Commonwealth, the sum of two thousand dollars per annum to the trustees of the Massachusetts Eye and Ear Infirmary, for the term of five years from the fourteenth day of April next, in aid of the charitable purposes of said Infirmary; and that warrants be drawn accordingly. [March 22, 1848.]

CHAPTER 101.

AN ACT CONCERNING THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows: —

The Massachusetts Charitable Eye and Ear Infirmary may hold real estate not exceeding the value of seventy thousand dollars, in addition to the amount they are authorized to hold by the act incorporating said Infirmary. [April 13, 1849.]

BY-LAWS OF THE CORPORATION.

ARTICLE 1st. The corporation shall be composed of the persons named in the "Act incorporating Certain Persons by the Name of the Massachusetts Charitable Eye and Ear Infirmary"; of all persons who have been or may be managers; and of all persons, not disapproved by the managers, as have given or subscribed, or may give or subscribe, fifty dollars and upwards, or any article or property of the value of fifty dollars and upwards, to the institution, and all such persons shall be life members of the corporation. The annual payment of any sum not less than one dollar shall constitute the subscriber a member.

ARTICLE 2d. There shall be a meeting of the corporation on the last Thursday of October of each year, for the choice of twelve managers, a treasurer, and a secretary, to serve one year, and until others shall be chosen in their stead.

ARTICLE 3d. Notice of the annual meeting of the corporation shall be given by the secretary, once at least in two of the newspapers published in Boston, seven days before the day of meeting, and votes may, at all elections, be given in person or by proxy.

ARTICLE 4th. The managers herein directed to be annually elected shall constitute a Board for the immediate man-

agement of all the property and concerns of the institution. They shall meet at least four times during the year, and have power to fill any vacancy in their Board. Three managers being present at any meeting shall constitute a quorum for the transaction of any business, except the alienation of the property of the corporation. They shall choose a president, who shall likewise be president of the corporation. They shall have power to take any measures which they may deem expedient for encouraging subscriptions, donations, and bequests to the corporation; to petition the Legislature for any additional grants or privileges, and for such amendments and alterations of the several acts relative to the corporation as they may think advisable; to take charge of and watch over the general interests and concerns of the institutions; to enter into and bind the corporation by such compacts and engagements as they may deem advantageous; to appoint annually, or otherwise, all proper and necessary surgeons, officers, assistants, and servants, for the superintendence and management of the respective departments, with such salaries and allowances as they may from time to time fix and determine, all of whom shall hold their respective offices subject to removal by the managers; to make such rules and regulations for the government of said surgeons, officers, assistants, and servants, and for the admission of patients, and the well-ordering and conducting the respective departments of the institution, as to them may seem proper and expedient. They shall cause a fair record of all their doings to be kept by the secretary, which shall be submitted to the corporation at every meeting thereof; and at every annual meeting they shall make a written report on the treasurer's accounts and on the general state of the institution, comprising a statement of the number of patients admitted and discharged during the year, and an account of the receipts and expenditures of the institution; and for the

purpose of making this report, they shall, at some previous meeting, appoint a committee of the Board, whose duty it shall be to examine the books and audit the accounts of the treasurer in each year.

Article 5th. It shall be the duty of the president to preside at all meetings of the corporation and managers. In his absence, a president *pro tempore* shall be chosen. The president shall call a special meeting of the managers whenever he may judge it expedient, or at the request of any two of their number, giving at least one day's notice of the time and place.

Article 6th. The treasurer shall give bonds to such amount, and with such surety or sureties as shall be satisfactory to the Board of Managers, conditioned for the faithful discharge of his duties, which bonds shall be held by the president. He shall receive and have the custody of all moneys, bonds, notes, deeds, and other securities belonging to the corporation, which he shall keep and manage under the direction and control of the Board of Trustees, or any committee of the Board; and any change which shall be made in the disposition of the funds or property of the institution shall be reported by him to the managers at their next meeting. He shall pay no moneys but by order of the Board of Managers or of their committees. He shall render an account of the state of his books, and of the funds and property in his custody, when called for by the managers or corporation, and he shall make up the annual accounts previous to the last Thursday of October in each year, to be laid before the corporation at their annual meeting, together with the report upon the general state of the institution, by a committee of the managers, to be seasonably chosen for that purpose, as is provided in Article Fourth.

Article 7th. The secretary shall attend all meetings of the corporation and managers, and keep a record of the proceedings of each meeting in a book kept for that purpose; he shall give public notice of all meetings of the corporation, as is provided in Article Third, and at least one day's notice of all meetings of the managers; and in the absence of the president from the city, he shall call a special meeting of the managers at the request of any two of their number.

Article 8th. The property of this corporation shall not be alienated except with the consent of a majority of all the managers.

REGULATIONS OF THE INFIRMARY.

ADOPTED 1875.

Article 1st. The Board of Managers shall annually, at the first meeting after the annual meeting of the corporation, choose by ballot three or more Surgeons, a Superintendent, one or more Assistants, and a Matron; all of whom shall hold their respective offices during the pleasure of the Managers, who may, whenever in their opinion it is expedient, dispense with any of the above officers, or appoint others with such duties as they may prescribe.

Article 2d. At said meeting the managers shall divide themselves into Visiting Committees, so that a Committee shall always consist of two Managers, but so that one Manager shall go out each month.

Article 3d. There shall be a meeting of the Board of Managers on the first Tuesday of the months of November, February, May, and August respectively, at such time as they shall determine, for the purpose of examining into the general state of the Infirmary; and at this meeting all reports, books of accounts, and minutes relative to the Infirmary shall be laid before the Board.

Article 4th. The Visiting Committee shall meet at the Infirmary every Monday morning at ten o'clock; but in the absence of his colleague, one member shall have full power

to act. The Committee shall at each visit receive from the superintendent a list of the patients, and shall see each of them if practicable. They shall examine carefully the state of every part of the establishment, and ascertain whether its officers and attendants fulfil their duties faithfully and humanely. They shall certify the admission of all patients and the terms thereof, and they shall also decide at each visit upon the continuance or discharge of every patient after the expiration of three weeks from his or her admission to the Infirmary; and they may at all times dismiss any patient whom they think improperly admitted, or for any cause unfit to be retained in the house, or alter the terms of admission. They shall keep a book of record at the hospital, common to all the Committees in succession, in which shall be entered, at each weekly visit, the names of all persons by them admitted, as well as the names of such as have been discharged, or died, or have in any way left the Infirmary, and all other business which shall come before them, which book shall be laid before the Board of Managers at their quarterly meetings. They shall give such orders and establish such regulations, from time to time, as they may think proper to effect the objects of the institution; provided the same be not repugnant to the laws of the corporation or to the rules and regulations, and that their action be reported to the Board of Managers at their next meeting. At the close of each quarter they shall examine the accounts of the Superintendent and Matron, and certify to the managers whether the expenditures have been proper and should be allowed.

Article 5th. All poor persons afflicted with diseases of the eye or ear, desiring medical treatment as out-door patients, can receive the same gratuitously by applying at the Infirmary in Charles Street, from nine to eleven o'clock, on each day of the week, Sundays excepted; and all applicants

for admission as house-patients must obtain at the same hours, from the Surgeon on duty, a certificate that the case is a proper one for treatment, and then apply to the Superintendent for admission; and any admission made shall be notified to the Surgeon of the day by the Superintendent; but in cases of accident, or special exigency, the Superintendent may admit to the house temporarily, awaiting a medical examination. Three weeks' board in advance, at a price established from time to time by the Managers, shall be charged to all patients; the Superintendent, with the approval of the Visiting Committee, may accept a smaller amount, or grant admission to a free bed, in such cases as he shall think proper, and whenever so instructed by the Visiting Committee. At every continuance of a paying patient, board in advance shall be charged for the term of such continuance at the previous rate, unless changed by the Visiting Committee, and all patients leaving before the expiration of their term shall be entitled to a proportionate return. When a patient remains only one day the charge shall not be less than one dollar. The price of board of any patient, as approved by the Visiting Committee, shall not be altered unless by their permission. The beds in the house shall be numbered and so distributed among the Surgeons from time to time by the Visiting Committee as to divide their labor as equally as possible; and each Surgeon shall be expected to treat the cases which shall have been assigned to his beds by the Superintendent; but the Surgeons may borrow or exchange beds among themselves subject to revision by the Visiting Committee, and may use vacant or available beds in special cases of need subject to their revision. At least one room shall be retained for contagious cases, and no new patient shall be placed in such room until after it has been thoroughly purified. Such cases shall always be reported to the Committee.

Article 6th. One or more Surgeons shall be present at the Infirmary from nine to eleven o'clock every day, Sundays excepted, to attend to such persons as may apply for treatment as out-door patients, and it is expected that the house-patients shall be visited daily. They shall weekly certify in writing to the Visiting Committee the propriety of retaining or discharging each patient after the expiration of three weeks from his or her admission. It shall be their duty to report in writing to the Visiting Committee any impropriety or negligence which they may have observed in the Infirmary. They shall also report, whenever they shall see occasion, on the general state and condition of the Infirmary, its officers, and attendants, and shall suggest such improvements as to them may seem advisable. A book shall be kept by them, or under their direction, in which shall be recorded, under appropriate columns, the name of each house-patient, his or her age, residence, and place of birth, the name of the attending Surgeon, date of admission, removal, discharge, elopement, or death, the name of each patient's disease, with the treatment pursued, and the condition of every patient at the time of discharge, with such remarks in each case as they may deem useful. At the end of each quarter a recapitulation shall be made in the record book, showing the total number of house-patients under each head. At the close of each year they shall make a report to the Managers of the general state of the medical department, with a table of the diseases of the patients and their results, so far as they can be ascertained.

Article 7th. The Assistants shall be in attendance daily at the Infirmary during the whole time of the Surgeons' visit, to prepare medicines, give ether, keep the books, and perform such other duties as the surgeons, with the approbation of the Visiting Committee, shall direct and require.

Article 8th. The Superintendent shall, under the direction of the Visiting Committee, have the general charge and oversight of the Infirmary. He shall purchase provisions and stores, subject to the direction of the Treasurer. He shall purchase all medicines and other articles required for the use of the Surgeons, and order all printing. He shall admit all patients to the house, and determine the price of their board, subject to the approval of the Visiting Committee. He may also refuse any patient for a sufficient reason, subject to the same authority, and may dismiss any patient with the approval of the Committee, after consultation with the attending Surgeon. He shall assign beds to the patients, first filling those of the surgeon of the day, so far as they shall suffice for the accommodation of new patients, and assign the remaining patients to the other Surgeons in proportion to existing vacancies. He may also, with the sanction of the Surgeons and Visiting Committee, at any time change the beds of the patients in the house. In special cases, changes may be made by the Surgeons in the absence of the Superintendent. He shall present to the Visiting Committee the reports of the Surgeons upon the continuance or discharge of patients. He shall receive all dues from patients, and all moneys or other articles deposited by them for safe keeping. He shall write the books of the Visiting Committee, and shall keep a true and exact account of all receipts and expenditures of his department, to be submitted to the Visiting Committee whenever required to do so, and to the Managers at their quarterly meetings. He shall pay to the Treasurer each month all sums of money received by him. He shall hire, oversee, and direct all the nurses and men servants in and about the Infirmary, and shall particularly see that they are kind and attentive to the patients, obedient to the directions of the Surgeons, and decent, moral, and sober in their deportment. The Superintendent shall be responsible for the welfare and comfort of the house-patients,

with full authority, subject to the Visiting Committee, over all the inmates of the institution for the preservation of discipline and order. He shall report all violations of the rules and regulations of the institution to the Visiting Committee, and be in all cases subject to their directions. It is expected that he shall make at least one visit to the house every day after the visits of the Surgeons.

Article 9th. The Matron shall have the care of the rooms and furniture of the Infirmary. She shall be responsible for the safe-keeping, economical use and expenditure of provisions and stores. She shall hire and discharge all female domestic servants, and pay them by an order on the Superintendent; and except during the attendance of the Superintendent, she shall have full authority over all the inmates of the Infirmary, and shall be responsible for their behavior and their care. She shall keep an accurate account of the expenditures of her department, which she shall render to the Visiting Committee at the close of each quarter.

Article 10th. Patients may receive the visits of their friends daily from eleven to twelve o'clock, but the Superintendent may exercise discretionary powers in excluding or admitting visitors at other hours.

Article 11th. Such free patients as are able, in the opinion of the Surgeons, shall assist in the care of others, or in such services as the Superintendent may require; and if any patients refuse to perform such acts, their names shall be forthwith reported to the Visiting Committee.

Article 12th. No free patient shall be continued after the term of three months without a special vote of the managers for that purpose.

Article 13th. No expenditure shall be incurred for repairs or refurnishing of the house, except by order of the Board of Managers.

FORTY-SECOND

ANNUAL REPORT

OF THE

Massachusetts Charitable

EYE AND EAR INFIRMARY.

For the Year ending September 30, 1867.

BOSTON:

PRESS OF JOHN WILSON AND SON.

1867.

OFFICERS FOR THE YEAR 1867.

Managers.

S. D. TOWNSEND, M.D., *Pres.*
EDWARD REYNOLDS, M.D.
J. A. BLANCHARD.
J. H. WOLCOTT.
BENJAMIN S. ROTCH.
C. R. CODMAN.
R. STURGIS, Jr.
JAMES LAWRENCE.
HARVEY JEWELL.
AUGUSTUS LOWELL.
J. W. EDMANDS, *Treasurer.*
T. K. LOTHROP, *Secretary.*

Surgeons.

ROBERT W. HOOPER, M.D.
GUSTAVUS HAY, M.D.
HENRY L. SHAW, M.D.
HASKET DERBY, M.D.
FRANCIS P. SPRAGUE, M.D.
B. JOY JEFFRIES, M.D.

Assistant Surgeon.

ROBERT WILLARD, M.D.

Matron.

MARY G. WATSON.

TREASURER'S REPORT.

THE Treasurer of the MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY presents, with the statement of its financial condition, classified details of the expenditures and receipts of the past year.

The property of the Institution consists of—

The Infirmary Estate on Charles Street, costing . .	$70,000.00
Policy of Massachusetts Hospital Life-Insurance Co. (The interest only being available.)	6,700.00
Bank Stocks	27,200.00
Railroad Stocks	13,500.00
United-States Bonds	4,000.00
Cash on hand	190.86
Total property	$121,590.86

The receipts for the year have been—

Interest on Investments	$4,875.07
State Grant	5,000.00
Donations	1,000.00
From "Paying-patients" for Board	1,203.25
Income of 1867	$12,078.32

Expenses of the year have been —

Repairs of House	$781.35
Furnishings	683.74
Provisions	4,822.88
Fuel, Gas, and Water	1,088.59
Salaries and Domestics' Wages, including $400 to Matron	2,244.25
Miscellaneous	170.13
Medicines and Instruments	866.35
Total Expenditures	$10,657.29

At the commencement of the year, we owed nine hundred and thirty dollars, and seventeen cents. We close it with no debt beyond a few unsettled house-bills, to appear in next year's accounts.

Since the erection of the Infirmary Building, by means of which the benefits of the Institution have been incalculably increased, we have relied for its support, and must continue to rely, on voluntary contributions of individuals, and the annual grant made by the State. The amount solicited from the State has varied from year to year, according to the extent of individual donations for the time, and the variable cost of supporting the house. With the exception of a special appropriation of fifteen thousand dollars made in 1846, the annual grant has been in sums varying from two thousand to five thousand dollars, the last-named amount being that of the last year. We have faith that the beneficence of friends will be commensurate with the wide charity of the Institution, and hope that the time is not remote when we shall need from the State an amount smaller than what we are now compelled to ask for.

In this connection it is proper to notice the receipt, during the past year, of one thousand dollars from London. It would be a satisfaction to make acknowledgment direct

to the donor for this unexpected, timely, and liberal gift, but his chosen concealment of name prevents our so doing.

It will be seen that it is the cost of supporting the house, with its thirty-nine patients'-beds, which makes up nearly all the expenditure. There has been paid out for medical or surgical service only one hundred dollars, — which was to the Assistant Surgeon, — which includes what has been done for the house-patients, as well as the three thousand five hundred and eighty out-patients.

The administration, professional services, growth and practical working of the Institution, are set forth in the Annual Report of the Surgeons. The increasing demands upon it preclude the anticipation of our ability to lessen the establishment, and by that means curtail expenses. It has ever been the aim of the managers to draw as lightly as possible on the State-charity appropriations, but we must ask for a continuance of the same grant of five thousand dollars for the year ensuing. For what is necessary beyond that, to cover the expenses of the coming year, we must rely on the donations of the charitable.

Respectfully submitted,

J. WILEY EDMANDS,

Boston, Oct. 20, 1867. *Treasurer.*

SURGEONS' REPORT.

The Surgeons, in presenting their Report to the Trustees, beg to call attention to the great work of benevolence performed by the Massachusetts Charitable Eye and Ear Infirmary for so many years, — a work so silently and unobtrusively carried on, that it has been but imperfectly understood and appreciated by the general public. Since the foundation of the Institution in 1824, seventy-two thousand one hundred and thirty-six (72,136) patients, applicants from the ranks of the suffering poor, have received gratuitous treatment from its resources. It would be difficult to over-estimate the amount of good done by this noble charity, not only in relieving present pain and suffering, but in enabling numbers of either sex, who would otherwise have been a burden on society, to earn their own livelihood, and thus add to, instead of diminish, the resources of the community in which they live. Experience amply shows that, but for the prompt relief afforded by proper treatment, the natural tendency of diseases of the eye is toward the destruction rather than the restoration of that most important organ. A very large number of these diseases occur among those who are least able to attend to their care. The poor, ill-fed, over-burdened, living in an unhealthy

atmosphere, and particularly exposed in their mechanical employments, are those to whom the benefits of charities of this nature immediately and appropriately belong. A natural sequence of the constantly increasing reputation of the Institution has been a great diversity in the social condition of those applying for relief, which has in all cases been extended to worthy recipients of every nationality, poverty being the sole qualification demanded.

The study of the eye and its various forms of disease did not claim the attention of scientific men for years, whilst other branches of medicine advanced with rapid strides. It is now not a hundred years since an interest was awakened in this branch of medical science, which in 1773 resulted in the setting aside of certain wards in the General Hospital of Vienna for the treatment of patients suffering from ophthalmic disease, and the clinical instruction of students in this department of medicine. In the year 1804 this example was followed in Great Britain, by the establishment of the London Eye Infirmary, which, six years later, was opened to students. To this school were drawn young American physicians, then pursuing their studies abroad; and to the interest in this subject awakened in their minds is due the inception of similar enterprises in this country. From this resulted the foundation of the Eye Infirmary in New York by Drs. Delafield and Rodgers, in 1821.

The honor of the first impulse given to the systematic treatment of diseases of the eye among the poor of Boston, is due to our venerable fellow-townsman and present Trustee, Dr. Edward Reynolds. He, in connection with Dr. John Jeffries, established, in November, 1824, the first gratuitous clinique in this city. Furnished with limited means, and commencing with a single room, the benefits

conferred by their labors were nevertheless strikingly apparent. Eighteen months later, at a meeting convened for the purpose, a report of their proceedings was considered; and so impressed were those present with the humanity and success of the enterprise, that a subscription was at once undertaken to give it permanency. This was promptly responded to; and in March, 1826, at a meeting of subscribers, the institution was regularly organized under the name of the Boston Eye Infirmary, and a Board of Managers appointed. In February of the following year it was incorporated by the Legislature of the State, under the name of the Massachusetts Charitable Eye and Ear Infirmary. During the following ten years its locality was thrice changed, the last removal being to the Gore Mansion-house in Green Street, where, with increased accommodations and facilities, it not only enlarged its sphere of usefulness to the suffering, but threw open its doors to medical students, and established a course of lectures. It thus imparted a new impetus to the study of diseases of the eye, and, through its pupils, spread its benefits far and wide. For fourteen years the institution continued its good work in Green Street; the number of its patients steadily increasing, until, in 1850, nearly twenty-five thousand patients had received relief. Before this date it was found indispensable to again increase its capacity, or allow many applicants to suffer for want of assistance. The State and private individuals again came forward to its support; and in 1850 the present building on Charles Street was ready for occupation. During the last seventeen years, the increasing number of patients has vouched for the continued and still increasing usefulness of the Institution. From November, 1824, to May, 1850, a period of twenty-six years, the whole number of applicants for relief amounted

to 24,339; from May, 1850, to October, 1867, a period of seventeen years, the number has increased by 47,797. Thus, during the last seventeen years, the number of patients was about double that of the preceding twenty-six years. The total, as already mentioned in the beginning of this Report, amounts to 72,136 persons, whose names are found recorded on our books. The last exhibits a larger number than any previous year; showing the rate of applications to be still on the increase, and that the poorer classes are fully awake to the value of the institution, and disposed to avail themselves of its charity.

The number of beds in the infirmary is thirty-nine; nineteen being devoted to males, and twenty to females. Half of these are free; the remainder pay the nominal board of three dollars a week, fixed many years ago. In no instance, however, is an urgent case refused gratuitous admission, when it can be accommodated.

The State has manifested an enlightened liberality, by contributions to the funds of the infirmary, and has thus recognized its value as a means of rescue from hopeless blindness and pauperism; thus diminishing the drain on the resources of the Commonwealth, and adding to its productive labor. An increased number of beds would enable the surgeons to render this charity still more valuable to the State, in relieving it of the burden of those nearly blind from the lack of necessary and continued treatment.

The following selections, from a statistical table of forty-one ophthalmic hospitals and infirmaries, will show our number of beds to be relatively disproportioned to the population: —

City.	Number of Beds in Ophthalmic Hospitals.	Number of Inhabitants.
Dresden	50	128,000
Düsseldorf	80	55,000
Halle	50	46,000
Heidelberg	106	17,700
Königsberg	44	95,000
Moscow	96	350,000
Munich	40	165,000
Prague	180	160,000
Riga	75	65,000
Turin	300	179,000
Utrecht	44	57,000
Zurich	45	40,000
Boston	39	300,000 inclusive of immediate suburbs.

The surgeons also feel the pressing need of some private rooms for patients, similar to those every hospital has. These they think the present building will supply, and would form a source of income to the Institution. Many of the better class of patients cannot enter the infirmary, unless they could have a room to themselves, for which they would gladly pay a suitable sum. This fact modifies the apparent results of the surgeons' work; for instance, their cataract cases come from a much lower class in the community, including many very unpromising cases, thereby reducing their general average of success. Moreover, no surgeon ever has his private cases in the infirmary; and these are the ones, of course, which, in tabular statements generally, swell the number of brilliantly successful operations. The result of the operations here reported is considered equal to that from the *same material* elsewhere. Were patients of some means enabled to derive the benefit of the skill of the surgeons, — and such applications are of very frequent occurrence, — they would avail themselves

of it, provided they could be furnished with separate and suitable rooms. The surgeons cannot but feel that this would greatly benefit the infirmary, by causing it to be better known and more highly appreciated.

They desire at this time to draw the particular attention of the Trustees to the aural department. The number of patients has increased *one-third*, the past year, amounting to 901; and the increase seems to be progressive.

Soon after the dedication of our present building, Professor Helmholtz invented the ophthalmoscope, — forming an era as well in medicine as in ophthalmology, which, rescued from the hands of charlatans in the first half of this century, seems in this half destined to rank the highest as a scientific specialty. Some of the most profound thinkers and earnest workers in medicine, abroad and at home, are devoting themselves exclusively to the science of ophthalmology, and are giving, not only to themselves, but to the cities where they reside and the universities and institutions to which they are attached, a world-wide reputation. Ophthalmology is silently and surely asserting its rank in medicine in the New World, as is shown by the establishment of chairs and lectureships by the various medical faculties. Its position the surgeons desire should be realized by the Trustees; for the profession naturally look to the Massachusetts Charitable Eye and Ear Infirmary — the second opened in America — as one of the centres of American ophthalmology. Since the dedication of the present building, ophthalmic hospitals have been established in more than twenty of the cities of Europe and America. This is due to the elevated character our science has derived from the invention of the ophthalmoscope, the study of the laws of refraction and accommodation of the eye, the safety and

brilliancy of recent methods of operating. All of which further stimulates your surgical staff to endeavor faithfully to carry out the great purpose of the Infirmary, — the restoration of sight and hearing.

R. W. Hooper.
G. Hay.
Hasket Derby.
H. L. Shaw.
F. P. Sprague.
B. Joy Jeffries.

Boston, Oct. 1, 1867.

CLASSIFICATION OF PATIENTS, DISEASES, AND OPERATIONS.

The number of patients applying during the year ending Sept. 30, 1867, has been 3,918. The tables which follow give the sex, residence, classification of diseases, and operations: —

Whole number of patients		3918
No. of patients with disease of eyes		3017
No. of patients with disease of ears		901
Males		2057
Females		1861
Residents of Boston		2037
,, of other parts of Mass.		1645
,, of Maine		85
,, of New Hampshire		56
,, of Rhode Island		30
,, of Vermont		15
,, of Connecticut		11
,, of other States		16
,, of British Provinces		18
,, of Foreign Countries		5
		3918
No. of patients admitted into Infirmary		338
,, of males	181	
,, of females	157	
		338

CONJUNCTIVA.

Catarrhal Ophthalmia (acute and chronic)	467
Purulent Ophthalmia	29
Gonorrhœal ,,	6
Ophthalmia neonatorum	8
Granulations (Trachoma Pannus)	208
Phlyctenular Ophthalmia	161
Symblepharon	4
Pterygium	22
Pinguecula	4
Subconjunctival Abscess	1
,, Ecchymosis	2

CORNEA AND SCLERA.

Keratitis	150
Opacity and Synechia, anterior	140
Ulcer of Cornea	214
Staphyloma, anterior	22
Keratoconus	1
Abscess of Cornea	3
Scleritis and Episcleritis	5

IRIS AND CILIARY BODY.

Iritis, traumatic	13
,, syphilitic	14
,, rheumatic	87
Foreign body on Iris	2
Dialysis	3
Prolapse of Iris	2
Cyclitis	2

CHOROID AND VITREOUS.

Irido-choroiditis	22
Glaucoma	11
Sclerotico-choroiditis, posterior	1
Membrane and opacity of Vitreous	27

RETINA.

Hyperæmia	14
Retinitis	1
„ albumenurica	1
„ nyctalopica	2
„ pigmentosa	2
Hyperæsthesia of Retina	5
Apoplexies of „	4
Separation of „	11

OPTIC-NERVE.

Atrophy	18
Neuro-retinitis	1

LENS.

Cataract, hard and soft	116
„ traumatic	16
„ capsular	5
„ glaucomatous	5
Dislocation of Lens	3

LESIONS OF GLOBE.

Mikrophthalmos	1
Phthisis bulbi	1
Hæmophthalmos	2
Hydrophthalmos	1
Panophthalmitis	6
Sympathetic Ophthalmia	4

ACCOMMODATION AND REFRACTION.

Paralysis of Accommodation	4
Presbyopia	11
Asthenopia	50
Hypermetropia	40
Myopia	42
Astigmatism	9

MUSCULAR AFFECTIONS AND NEUROSES.

Paralysis	11
Strabismus convergens	53
,, divergens	6
Nystagmus	2
Blepharospasmus	6
Amblyopia	48
,, potatorum	8
Amaurosis	12

LIDS.

Abscess	13
Blepharadenitis	181
Hordeolum	23
Chalazion	52
Ectropium	9
Entropium	23
Trichiasis	10
Ptosis	7
Lippitudo	20
Eczema	17
Inflammation	7
Epithelioma	1
Lupus	2

LACHRYMAL PASSAGES.

Epiphora and obstruction of Lachrymal Ducts	101
Affections of Lachrymal Passages	59

GENERAL INJURIES.

Foreign bodies on Conjunctiva, Cornea, and Sclera	163
Blows and cuts	82
Not recorded	105

DISEASES OF THE EAR.

Disease of External Ear	9
Foreign bodies in the Ext. Meatus	22
Polypi	12
Obstruction of Ext. Meatus from Cerumen	78
Otitis externa	389
Disease of Membrana Tympani	67
Otitis interna, acute	81
,, ,, chronic	257
Disease of Labyrinth	11
Obstruction of Eustachian Tube	7
Otalgia	3
Malformation of External Ear	1
Unclassified	11
	948

OPERATIONS.

There have been two hundred and forty-seven operations, as follows:—

Cataract.*	Total.	Successful.	Undetermined.	Unsuccessful.
Flap upwards	6	5	1	0
Flap up; previous iridectomy	3	3	0	0
Flap up; with iridectomy	10	9	1	0
Flap downwards	6	4	1	1
Flap down, with iridectomy	3	2	1	0
Linear operation	5	3	1	1
Discission	3	3	0	0
Totals	36	29	5	2

Cataract	36

IRIDECTOMY.

Preparatory to Cataract	10
For artificial Pupil	20
Irido-choroiditis	4
Glaucoma	8
Iritis, old	9
Foreign body on Iris	1
	52

* See note at foot of page 20.

For removal of opaque capsule	10
Hancock's operation	2
Prolapse of Iris	2
For removal of Staphyloma Cornei	3
Enucleation for sympathetic Ophthalmia	14
„ „ tumor of the globe	2
„ „ hydrophthalmos	3
Pterygium, excision of	1
„ Desmarre's operation for	5
Strabismus convergens	34
„ „ secondary operation	9
„ divergens	2
„ „ secondary operation	2
Entropion	22
Ectropion	2
Trichiasis	9
Distichiasis	2
Symblepharon	2
Ptosis	1
Plastic on Lid	1
Tumor of Lid	15
Miscellaneous	16
	247

Note. — The subjoined table gives the result in twenty-two cases where the vision was accurately measured. The amount of vision is, of course, less than it will be, ultimately, for it is taken only from three to four weeks after the operation was performed. Of the thirty-six cases of operation, in two, the eye was lost by panophthalmitis; five cases are undetermined, some of them requiring a subsequent operation for the removal of capsule from the pupil, and others having left the Infirmary before it was considered safe to test the vision. Of the twenty-nine recorded as successful, the following table gives the amount of vision for distance in twenty-two, — all of them could read ordinary type, but in seven the exact result for distance is wanting, the patient having left before an opportunity was afforded for examining the vision. The scale used has been Dyer's test type, — the patient wearing an appropriate convex glass: —

Amount.	Number.	Amount.	Number.
V = 1	1	V = $\frac{1}{5}$	1
„ = $\frac{2}{3}$	1	„ = $\frac{1}{6}$	2
„ = $\frac{1}{2}$	3	„ = $\frac{1}{8}$	1
„ = $\frac{1}{3}$	4	„ = $\frac{1}{10}$	1
„ = $\frac{2}{7}$	1	„ = $\frac{1}{12}$	2
„ = $\frac{1}{4}$	5		22

FORTY-FOURTH

ANNUAL REPORT

OF THE

MANAGERS

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

NOVEMBER, 1869.

BOSTON:
1869.
DAILY ADVERTISER PRESS,
29 Court Street.

OFFICERS FOR THE YEAR 1869--'70.

MANAGERS.

President:
EDWARD H. CLARKE, M. D.

EDWARD REYNOLDS, M. D.,
J. A. BLANCHARD,
J. HUNTINGTON WOLCOTT,
BENJAMIN S. ROTCH,
CHARLES R. CODMAN,
R. STURGES, JR.,
JAMES LAWRENCE,
T. K. LOTHROP,
HARVEY JEWELL.

Treasurer:
J. WILEY EDMANDS.

Secretary:
AUGUSTUS LOWELL.

Surgeons: —
ROBERT W. HOOPER, M.D.
GUSTAVUS HAY, M.D.
HENRY L. SHAW, M.D.
HASKET DERBY, M.D.
FRANCIS P. SPRAGUE, M.D.
B. JOY JEFFRIES, M.D.
Microscopist and Curator of the Pathological Cabinet.
ROBERT WILLARD, M.D.

Assistant Surgeon:
GEORGE W. HANDY, M.D.

Matron:
MARY G. WATSON.

REPORT OF THE MANAGERS.

At the last meeting of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, it was

Voted, That the Treasurer should prepare for publication a statement of the present condition of the affairs of the Institution.

In pursuance thereof, he now presents such portions of the Surgeons' Report for the year past as are deemed of interest to the public, and the Annual Report of the Treasurer. This is presented in printed form, mainly for the purpose of showing to those who have in the past aided the Institution by their donations, and to all who have been instrumental in advancing it to its present importance, that their generosity and their labors have not been fruitless.

The extent of the present operations of the Infirmary, in its special work of charity, equally demonstrates the beneficent forethought of its founders and our obligations to sustain it. It seems absolutely indispensable to a large class of the poor in our community, who cannot obtain from any other society relief from the disorders of the eye and the calamities incident to their neglect.

We consider it second to no one of our public charities in point of usefulness. Seventy-six thousand patients have received professional treatment at the Infirmary since its foundation in 1824, and in no one year of its operation so many as in the last, a considerable proportion of whom would otherwise have become helpless paupers for the want of sufficient sight to enable them to earn a living. It is not the indolent and worthless of the community who form the class from which these patients come, but chiefly the industrious, who are actively engaged in occupations which cause injuries to the eye, and are ambitious to continue in useful employment.

It is second to no one in the Commonwealth, economically considered. It dispenses incalculable blessings at a comparatively insignificant expenditure of money. The value of eyesight the blind only can compute. Four thousand four hundred and forty-eight men and women have been treated the past year, at a cost (after deducting one thousand three hundred and sixty-two dollars voluntarily paid by house patients,) of two dollars and twenty-eight cents each, including, on an average, twenty-eight house patients occupying beds throughout the year. The State appropriated five thousand dollars, covering nearly one-half this cost, or one dollar and twelve cents for each patient, and we venture to say that no public grant, of equal amount, secures such requital in return.

The increase of applicants who can be properly treated only by admission as inmates of the house,

has induced the Managers to order an addition to the number of beds, which will necessarily cause increased drafts on the treasury the coming year. The Surgeons represent in their report the need of greater facilities for meeting the demands made on them by the increasing number of important cases coming before them. The business of the Infirmary is outgrowing its appointments and its means. The original subscribers, once the support of the Institution, paid their annual contributions until their earthly ministerings ceased, and so few were left that the list was abandoned. Voluntary donations and occasional legacies, with the State grant, are its present resources, and they have hitherto sufficed for its support.

A new generation has taken the place of the patrons of the past, and to them we must appeal in this general way, to supply the means which will enable the Infirmary to meet the now pressing demands of our growing population.

For the Managers,

J. WILEY EDMANDS,

Treasurer.

Boston, November 8, 1869.

REPORT OF THE SURGEONS.

THROUGH the medium of special journals, society reports, and by means of local, national and international associations, the Opthalmic and Aural Surgeons in the various parts of the world are kept in communication with each other, and thus, by mutual thought and criticism, help forward their ever-advancing science. During the past year the Surgical Staff of the Infirmary have endeavored to keep this Institution up with the progress of the specialties here solely attended to.

The generous assistance afforded by the Legislature is in part repaid by what the Infirmary can do for the unfortunate inmates of the almshouses, who, when requiring assistance, are always freely admitted, and treated as long as required, or until their condition is such that they can be attended to by the Medical Staff of the Institutions from which they were sent.

The large and constantly increasing number of patients resorting to the Infirmary, calls for increased facilities and accommodations above those which the present building affords. We have not, for instance, a room or ward which can be kept for patients suffer-

ing from contagious diseases of the eyes, who cannot, therefore, safely be received into the building, although some of these diseases are most liable, from lack of proper treatment, to result in partial or total blindness, throwing the individual for support upon the charity of the community.

Modern science has shown the advantage and necessity, in certain circumstances, of the removal of the eyeball to avoid its affecting the other eye. Patients often refuse to have this done, on account of the expense of an artificial eye, and thus become afterwards liable to lose their other sound eye. We need the means to provide such with artificial eyes, as it is generally only by wearing these that their appearance is such as not to seriously interfere with obtaining employment of the character for which they are capacitated.

It is not understood by the community, as it should be, that diseases of the eye do not, in the majority of cases, tend to get well of themselves without treatment, but are apt to go on from bad to worse. This is specially true in reference to those affections of the eye most prevalent among the working classes, where the loss of the use of the eyes necessarily entails poverty and misery on their families, and increases the number of those in the community who must be supported by the State or private charity. Many cases require several months of careful treatment, in order to finally save useful vision. Such treatment as is then requisite can only be carried out in an Infirm-

ary under the surgeon's daily care. We need larger wards and more beds for the accommodation of this large class, which increases in proportion with the population. Only partial success can be obtained by treating them as out-patients, since they then are too apt to remain precisely in those circumstances which induced the disease. The number of those who thus lose useful vision, or become totally blind, is very great.

The success of the present operations in Opthalmic Surgery is such that a steadily increasing number of those requiring them is yearly applying to us. Now it must be remembered that such patients not only require to be operated on, but also to be persuaded to submit to operation. It is worthy of consideration whether some increase of facilities and accommodations cannot be made to conduce to this end, as it is generally to the most important and critical operations that this aversion exists.

Again, there is a large class of patients which from lack of room we cannot admit into the Institution, whom a few weeks sojourn with us would save from long treatment. Protracted treatment becomes therefore necessary. Great difficulty, however, is always encountered in the case of out-patients, in inducing the constant attendance so requisite for success; and these cases drag on from month to month, wearing out the patience of the patient, and defeating the best efforts of the Opthalmic Surgeon. Proper diet and hygiene, absolutely essential, can only be obtained

within the Infirmary or Hospital, but for want of space our doors must often be closed.

The communities from which the Infirmary draws its patients are largely manufacturing, where accidents to the eyes are of constant and frequent occurrence. The working classes are learning the necessity of seeking immediate advice and assistance in such cases, where every hour's delay is one of increased danger. The Infirmary ought to be freely open, at all times, to such applicants, and surgical aid be readily obtained. This our present means cannot afford, and the need of it is especially felt by the Surgical Staff.

It should be remembered that the present building was arranged for the requirements of twenty years ago, and has not been enlarged, whilst the population of the Commonwealth has increased about fifty per cent. Moreover, the inventions and discoveries in the field of ophthalmology and otology have during the past twenty years raised these specialties to a very high standard more commensurate with their importance, hence the greater trust of the community in obtaining relief and their greater willingness to seek it. Any policy which withholds such relief is only too short sighted; for nowhere is money *spent*, more truly money *saved*, than in preserving and restoring sight to the working classes.

A glance at the subjoined table will show the number of beds in eye infirmaries, compared to the population, in some of the cities of the world where eye infirmaries and cliniques exist.

Cities.	No. of Inhabitants.	No. of Beds.
Berlin,	600,000	120
Dantzic,	82,000	19
Darmstadt,	30,000	15
Dorpat,	14,000	24
Dresden,	128,000	50
Dusseldorf,	55,000	80
Frankfort,	80,000	12
Freiburg,	19,000	17
Glasgow,	490,000	24
Halle,	46,000	50
Hanover,	75,000	27
Heidelberg,	17,700	106
Königsberg,	17,700	44
Lausanne,	95,000	22
Leipsic,	80,000	31
Ludwigsburg,	12,000	23
Moscow,	350,000	96
Munich,	165,000	40
Prague,	160,000	180
Riga,	65,000	75
Stettin,	65,000	19
Stuttgart,	61,000	20
Turin,	300,000	300
Utrecht,	57,000	44
Vienna,	554.000	92
Wiesbaden,	27,000	54
Würzburg,	38,000	30
Zurich,	40,000	45

The Massachusetts Charitable Eye and Ear Infirmary has but thirty-nine beds, and yet its doors are open to all the needy inhabitants of the Commonwealth (numbering nearly one and a half millions,) who require advice, assistance or operation. Patients are also seen from all other States and countries.

Complaint has been made by the medical profession that the Infirmary, like other public charities, is abused by a large class in the community able to remunerate

a physician for services rendered. The Surgical Staff, receiving no emoluments from patients or trustees, are alike independent of bias on the one side or the other. With strict justice toward applicants, they endeavor, so far as possible, to refuse those who are apparently abusing a public and private charity, although they cannot but realize that this refusal tends to allow patients to fall into the hands of inexperienced and unskilled practitioners. But it is also true that physicians frequently themselves send to the Infirmary patients who can amply afford to pay for advice, and refusal in these cases often causes unreasonable complaint.

CLASSIFICATION OF PATIENTS, DISEASES AND OPERATIONS.

The number of patients applying during the year ending September 30, 1868, has been —

The tables which follow give the sex, residence, classification of diseases and operations: —

Whole number of patients,		4,448
Number of patients with disease of eyes,	3,328	
Number of patients with disease of ears,	1,120	
	——	4,448
Males,	2,359	
Females,	2,089	
	——	4,448
Residents of Boston,	2,228	
Residents of other parts of Massachusetts,	1,966	
Residents of Maine,	82	
Residents of New Hampshire,	68	
Residents of Rhode Island,	25	
Residents of Vermont,	26	
Residents of Connecticut,	6	
Residents of other States,	19	
Residents of British Provinces,	22	
Residents of foreign countries,	7	
	——	4,448

No. of patients admitted into the Infirmary, .		352
Males, ...	206	
Females, ...	146	
		352

CONJUNCTIVA.

Catarrhal Ophthalmia, ...	464
Purulent "	11
Gonorrhœal "	2
Diphtheritic "	1
Granular "	255
Phlyctenular "	199
Ophthalmia neonatorum, ...	7
Conjunctival tumors, ...	2
Xerophthalmia, ...	1
Symblepharon, ...	6
Pterygium, ...	16
Pinguecula, ...	2
Subconjunctival abscess, ...	1
Subconjunctival ecchymosis, ...	5

CORNEA AND SCLERA.

Keratitis, ...	174
Opacity and Synechia anterior, ...	8
Leucoma, ...	123
Ulcer of Cornea, ...	275
Staphyloma anterior, ...	18
Scleritis and Episcleritis, ...	1
Staphyloma of Sclera, ...	1
Tumor of Cornea, ...	1

IRIS AND CILIARY BODY.

Iritis Traumatic, ...	14
Iritis Syphilitic, ...	13
Iritis Rheumatic, ...	99
Ciliary Neuralgia, ...	10
Foreign body on Iris, ...	1
Dialysis, ...	2
Prolapse of Iris, ...	6
Cyclitis, ...	2
Mydriasis, ...	9
Coloboma, ...	1
Abscess of Iris, ...	1

CHOROID AND VITREOUS.

Irido Choroiditis.	12
Choroiditis,	34
Glaucoma,	14
Sclerotico Choroiditis Posterior,	5
Choroiditis Disseminata,	3
Muscæ Volitantes,	10
Membrane and Opacity of Vitreous,	6
Cystircercus,	1

RETINA.

Hyperæmia,	2
Retinitis,	4
Retinitis Albumenurica,	2
Retinitis Pigmentosa,	3
Retinitis Syphilitica,	1
Hyperæsthesia of Retina,	3
Apoplexies of Retina,	3
Separation of Retina,	17

OPTIC NERVE.

Atrophy,	22
Neuro Retinitis,	5
Neuritis,	3

LENS.

Cataract, hard and soft,	121
Cataract, Diabetic,	1
Cataract, Congenital,	6
Cataract, Traumatic,	17
Cataract, Capsular.	3

LESIONS OF THE GLOBE.

Exophthalmos.	3
Phthisis Bulbi,	18
Hydrophthalmos,	3
Panophthalmitis,	2
Sympathetic Ophthalmia,	2
Intra-ocular Tumor,	3

ACCOMMODATION AND REFRACTION.

Presbyopia,	30
Asthenopia,	53
Hypermetropia,	107
Myopia,	45
Astigmatism,	3

MUSCULAR AFFECTIONS AND NEUROSES.

Paralysis and Paresis,	14
Strabismus Convergens,	63
Strabismus Divergens	8
Nystagmus,	4
Blepharospasmus,	3
Amblyopia,	45
Amblyopia Potatorum,	7
Amaurosis,	6
Hemeralopia,	1

LIDS.

Abscess of Lid,	15
Blepharadenitis and Ciliary Blepharitis,	201
Hordeolum	25
Chalazion,	56
Ectropion	3
Entropion,	8
Trichiasis,	31
Ptosis,	1
Lippitudo,	
Eczema,	
Inflammation and Œdema of Lids,	6
Lupus,	1
Horn,	1
Warts,	1
Rodent Ulcer of Lid.	1

LACHRYMAL PASSAGES.

Epiphora and Obstruction Lachrymal Ducts,	107
Affection of Lachrymal Passages,	84
Affections of Lachrymal Gland,	4

GENERAL INJURIES.

Foreign Bodies in Conjunctiva, Cornea and Sclera,	204
Burns,	19
Blows and Cuts,	71
Disease of Orbit,	3
Not recorded and unfit,	76

DISEASES OF THE EAR.

Chronic Aural Catarrh,	256
Acute Aural Catarrh,	72
Otitis Externa,	203
Otitis Media,	174
Eczema,	27
Obstruction from Cerumen,	145
Abscess of External Ear,	12
Abscess of Meatus,	12
Furuncle in Meatus,	18
Fleshy Granulations in Meatus and on Membrana Tympani,	19
Polypi,	30
Myringitis,	18
Calcareous deposit on Membrana Tympani,	6
Traumatic Perforation of Membrana Tympani,	1
Deafness from Injury, (falls or blows on head.)	3
Deafness associated with Cerebral Disease,	3
Deafness associated with Syphilitic Disease of Bone,	1
Foreign Bodies in Ear,	5
Tumors of External Ear,	3
Nervous Deafness,	32
Obstruction of Eustachian Tubes,	4
Otalgia,	8
Unfit or Unrecorded,	68

OPERATIONS.

There have been two hundred and eighty-three operations, as follows:—

CATARACT.*

	Total.	Successful.	Undetermined.	Unsuccessful.
Flap downwards, .	1	1	0	0
Linear operation, .	3	3	0	0
Discission, . .	12	9	3	0
Græfe's method (peripheric linear), .	52	43	5	4
Total, . .	68	56	8	4

Cataract, ... 68

---

* The subjoined table gives the result in forty-seven cases where the vision was accurately measured. The amount of vision is, of course, less than it will be ultimately; for it was taken only from three to four weeks after the operation was performed. Of the sixty-eight cases of operation, in two the eye was lost by panophthalmitis, one was lost by intra-ocular hemorrhage after the wound was well healed, and one was lost by irido choroiditis; eight are undetermined, most of them requiring a subsequent operation for the removal of capsule from the pupil. Of the fifty-six recorded as successful, the following table gives the amount of vision for distance in forty-seven. All of them had useful vision, but in nine the exact result for distance is wanting, the patient having left before an opportunity was afforded for examining the vision. The scale used was Dyer's test type, the patient wearing an appropriate convex glass.

It is, in this connection, both proper and important to note the fact, that the patients who furnish these statistics were, without exception, in needy circumstances, and often dependent upon charity for their support. Institutions of a kindred nature, in this and other countries, are generally provided with private rooms for the reception of those in comfortable circumstances. Operations on patients thus situated are naturally apt to be followed by a larger measure of success than those performed in a public ward on persons in feeble health accustomed to privation and debilitated by want. It obviously results that these can be no selection of cases.

Amount.	No. of cases.	Amount.	No. of cases.
V=1, ...	1	V=1-6, ...	3
V=2-3, ...	4	V=1-8, ...	4
V=3-5, ...	1	V=1-9, ...	1
V=1-2, ...	5	V=1-10, ...	1
V=2-5, ...	8	V=1-16, ...	1
V=1-3, ...	8		—
V=1-4, ...	4	Total, ...	47
V=1-5, ...	7		

IRIDECTOMY.

For Artificial Pupil,	35	
Irido Choroiditis,	1	
Glaucoma,	13	
Iritis, old,	2	
Iridectomy, with removal of Shrunken Lens,	3	
Miscellaneous,	9	
	—	63
Agnew's Operation for Opaque Capsule,		3
For removal of Opaque Capsule,		9
For removal of Staphyloma Corneæ,		3
Enucleation for Sympathetic Ophthalmia,		11
Enucleation for Tumor of the Globe,		1
Enucleation for Anterior Staphyloma,		2
Enucleation of Disorganized Eye,		3
Pterygium, Desmarre's Operation for,		11
Strabismus Convergens,		29
Strabismus Convergens, Liebreich's Operation for,		6
Strabismus Divergens,		2
Entropion,		20
Entropion, Arlt's Operation,		4
Ectropion,		2
Trichiasis,		14
Distichiasis,		5
Enlargement, Palpebral Aperture,		5
Symblepharon,		3
Ptosis,		1
Tumor of Lid,		21
Horn of Lid,		1
Dermoid Tumor, inner Canthus,		2
Tumor of Conjunctiva,		1
Tumor of Lobe of Ear (fibrocellular),		1
Plastic Operation on Lobe of Ear,		1
For closure of External Auditory Meatus,		1
Total,		283

ROBERT W. HOOPER, M.D.
GUSTAVUS HAY, M.D.
HASKET DERBY, M.D.
HENRY L. SHAW, M.D.
FRANCIS P. SPRAGUE, M.D.
B. JOY JEFFRIES, M.D.
ROBERT WILLARD, M.D.

TREASURER'S REPORT.

THE Treasurer of the MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY presents herewith his Annual Report.

The property of the Institution consists of:

The Infirmary Estate on Charles Street, costing,	$70,000.00
Policies of Massachusetts Hospital Life Insurance Company, (the interest only being available,)	6,700.00
Bank Stocks,	27,977.75
Railroad Stocks,	14,386.88
United States Bonds,	8,975.00
	$128,039.63

The receipts for the year have been:

Interest on Investments,	$5,127.50
State grant,	5,000.00
From "Paying Patients" for Board,	1,362.20
Income of 1869,	$11,489.70

The expenses for the year have been:

Repairs of house,	$579.95
Furnishings,	866.59
Provisions,	5,221.24
Fuel, Gas and Water,	1,259.15
Salaries and Domestics' Wages, including $400 to Matron and $100 to Surgeons' Assistant,	2,366.50
Medicines and Instruments,	1,020.83
Miscellaneous,	218.19
Expenses of 1869,	$11,532.45

We have the satisfaction of reporting, on the termination of another year, that there has been no material excess of expenditures over receipts, the difference being only $42.75. Satisfactory as this is in an economical view, yet it is this close regard to our financial condition that now limits the action of the Infirmary in its field of usefulness, one that is unoccupied by any other institution, and which is constantly widening with the increase of our population. And it becomes a question to consider if we are not now justified in extending our facilities, even though it should involve a special call upon the charitable to replenish the treasury. At times during the past year too many patients have been admitted for the number of beds we have, and it would seem proper, if no more is done, to add at once as many beds as can be arranged by suitable change in the disposition of rooms.

The number of patients the last year was 4,448, being 605 more than were treated the year preceding. Of house patients there were 16 more than in the preceding year. The expenses of 1869 were $388.42 more than in 1868.

Respectfully submitted,

J. WILEY EDMANDS,

Treasurer.

Boston, October 28, 1869.

FORTY-SIXTH

ANNUAL REPORT

OF THE

SURGEONS

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

FEBRUARY, 1872.

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EDWARD H. CLARKE, M. D.,

President.

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B. JOY JEFFRIES, M. D.

Surgeon's Assistant:
WM. P. BRECHIN.

Matron:
MARY G. WATSON.

I. SURGEONS' REPORT.

As will be seen below a large number of persons have applied at the Infirmary for advice during the past year. They are supposed to be, and the most of them probably are, poor, unable to pay for the desired medical advice or for their medicines. They seek relief, some of them from pain, some from impairment or loss of sight, others from deafness or deformity, and others again from more than one of these ailments. The time has not come when charitable medical treatment can be dispensed with. The poor are among us and are suffering, they desire medical treatment and are grateful for the service.

Two classes of patients have been treated at the Infirmary; the so-called house-patients, those who are lodged and boarded at the institution, of whom there have been during the year 342; also the out-patients, who simply visit the institution, wishing advice and generally also medicines; of this class there have been during the year, 5,258, of whom 1,280 were ear-patients.

The large number of eye-patients, about 4,000 need not surprise us when we think of the delicate and complicated structures and functions of the eye, and of the excessive strain often imposed upon it by the necessity of earning a livelihood; of the liability to severe injury which accompanies many occupations, as those of boiler-

makers, machinists, stone-cutters, etc.; also of those accidents which may occur to children from dangerous amusements, as in exploding percussion caps, shooting pointed missiles, etc.; when we remember that many diseases of other parts of the body may bring with them serious disease of the eye, and how difficult it is for the poor to enjoy those requisites of health, good air, cleanliness, and wholesome food; — remembering these and other causes, we need not wonder at the frequency of ophthalmic diseases among the poor.

The diseases of this organ are many; for instance; the tear-passages may be obstructed, and the eyes overflow with tears; or the tear-sac may be the seat of a painful abscess; the lids may be variously diseased; they may not close properly; the lashes may scrape the eye; the lining membrane of the lids may be inflamed or rough; it may also become shrunken and scarred, the eyeball being thereby impeded in its movement and irritated. Besides these and other affections of the same parts, the various parts of the eyeball and optic nerve may be affected in ways too numerous to be mentioned here, the treatment of which requires the best efforts of the surgeon.

For many years at the Infirmary we have found the accommodations for the treatment of aural patients inadequate to our wants. But during the past year, through the liberality of the trustees, that difficulty has been obviated; an ample consulting-room for this class of patients has been provided, and experience has proved it admirably adapted to the purpose. This improvement has added to the comfort of the patients and surgeons, and its beneficial effects will undoubtedly be seen in the result of treatment, as the good light which this new room affords at all seasons enables us to make a more thorough examination of the ear and a more correct diagnosis.

An erroneous opinion exists in the community that diseases of the ear are scarcely benefited by treatment, consequently good results are seldom hoped for. Chronic diseases are often obstinate and frequently incurable. But acute affections may be treated with as much success as acute diseases of other organs. We may infer however from the increase of patients at the Infirmary to nearly fourfold within the last few years, that this error is at last on the decrease. On the other hand it must not be overlooked that aural surgery has been more extensively and successfully cultivated than heretofore. It would be well were the public impressed with the importance of seeking relief in the early stage of their trouble, as our statistics show that the larger proportion apply for treatment after the disease has assumed the chronic form.

To provide properly for the numerous applicants for treatment, the Infirmary needs of course ample hospital accommodations, good nurses, wholesome, palatable and often even attractive food; medicines, instruments, apparatus, etc. and to obtain these, money is needed, without which the charitable services of the institution must be contracted.

While the first object of the Infirmary should undoubtedly be to relieve the sufferings and disabilities of those unfortunates who are obliged by poverty to present themselves, often reluctantly, for medical treatment at a charitable institution, it is yet of great importance to afford to students of medicine, so far as is consistent with the principal object in view, an opportunity of observing the diseases and their treatment; inasmuch as any means which might contribute to the preparation of competent, well-instructed practitioners, unfortunately, at times needed by all of us, both rich and poor, should not, if practicable and proper, be neglected. In this connection,

it may also be remarked that notwithstanding the advance of otology and the comparatively engrossing importance of the many brilliant additions to ophthalmology made during the past twenty years, we can not think that the period of inquiry and improvement is passed; it may therefore be a legitimate part of the functions of the Infirmary, considering the ample opportunity for observation, to contribute if it may be so fortunate, something to the general stock of medical knowledge.

As to the results of treatment; many cases are relieved, or cured within a few weeks; others require a long period and a change of hygienic surroundings; others again hardly yield at all to medical treatment.

By the statistics given below, it appears that the number of males treated, exceeds that of the females by 266; that only a very small part of those applying for advice, came from places outside of Massachusetts; that diseases of the lachrymal apparatus, lids, conjunctiva, cornea and sclera constitute a little more than $\frac{6}{10}$ of all the cases; that there were 245 cases of foreign bodies on conjunctiva, cornea and sclera.

Among the operations, those for cataract interest the physician, both for their use in restoring sight and because among competent observers there is still some question as to the best method of operating, and as to the after-treatment. But notwithstanding these differences of opinion, the surgeon has frequently the happiness of restoring to sight, one who has previously been practically blind. Some of the recorded results would be better if taken at a later period, because some of those operated on leave the Infirmary before the eye, though perhaps promising well, has cleared up sufficiently for useful vision, although after a few months good vision may come, or might be obtained by an additional operation.

During the last year forty-six cases of cataract, which promised well, were operated on after the method of Græfe. Of these there were thirty-five, that is, three out of four, which obtained good vision, measured conventionally by the fraction $\frac{1}{10}$ or greater. Five obtained a valuable amount of vision. Four required a secondary operation. Two were lost.

Three cases operated on by the linear method obtained vision respectively $\frac{2}{5}$ $\frac{1}{5}$ and $\frac{1}{3}$.

Appended to this report is an account by Dr. Jeffries of some instances of the comparatively new operation of Passavant for the cure of certain cases of posterior synechia.

II. STATISTICS.

Classification of Patients, Diseases, and Operations.

Out Patients.

Whole No. Eye Patients, . . .	3,978
" " Ear " . . .	1,280
Total Eye and Ear Patients, . .	5,258
Males, ...	2,762
Females, ...	2,496
Residents of Boston, . . .	2,762
" " other parts of Massachusetts,	2,232
" " Maine, ...	102
" " New Hampshire, . .	60
" " Vermont, . . .	19
" " Rhode Island, . . .	23
" " Connecticut, . . .	6
" " other States, . . .	27
" " British Provinces, . .	23
" " Foreign Countries, . .	4
	5,258

House Patients.

Males,	234
Females,	108
Total,	342

Out Patients Continued.

Eye Patients.		
Males,	2,087	
Females,	1,891	
		3,978
Ear Patients.		
Males,	675	
Females,	605	
		1,280
Total,		5,258

Diseases of the Eye.

Lids.

Erysipelas,	3
Eczema,	17
Abscess,	19
Blepharadenitis,	219
Hordeolum,	34
Chalazion,	52
Ectropium,	5
Entropium,	14
Trichiasis,	33

Ptosis,	6
Symblepharon,	2
Anchyloblepharon,	1
Œdema and Inflammation,	18
Ecchymosis,	2
Lippitudo,	16
Epithelioma,	3
Warts,	6
Nœvus,	2
Rodent ulcer,	1

Conjunctiva.

Hyperemia,	34
Conjunctivitis, Catarrhal,	650
" Blenorrhoic,	9
" " neonatorum,	6
" Granular,	251
" Phlyctenular,	244
Ecchymosis,	19
Pterygium,	32
Pinguecula,	3
Œdema,	5
Xerophthalmia,	1
Wart,	1
Tumors,	3

Cornea and Sclera.

Keratitis,	243
Abscess of Cornea,	3
Ulcer " "	297
Opacity and anterior synechia,	11
Leucoma,	134
Staphyloma anterior,	14

Keratoconus,	1
Sclero-keratitis,	3
Scleritis,	1

Iris.

Iritis, rheumatic,	104
" syphilitic,	21
" traumatic,	14
" serous,	1
Prolapse,	4
Dialysis,	2
Wound of,	1
Hemorrhage from,	2
Foreign body on,	5
Coloboma,	2
Mydriasis,	6
Myosis,	1

Choroid.

Choroiditis,	17
Sclerotico-choroiditis posterior,	16
Irido-choroiditis,	15
" sympathetic,	6
Glaucoma,	17

Retina.

Hyperœmia,	2
Retinitis,	10
" albumenurica,	1
" pigmentosa,	3
" syphilitica,	1

Retinitis apoplectica,	5
Separation of,	13
Hyperæsthesia,	1

Optic Nerve.

Neuro-retinitis,	7
Atrophy,	32

Vitreous.

Hemorrhage into,	2
Membrane and Opacity of,	13
Foreign body in,	2
Muscæ Volitantes,	17

Lens.

Cataract, hard and soft,	107
" posterior polar,	4
" congenital,	18
" traumatic,	4
" capsular,	2
Dislocation,	4
Aphakia,	3

Lesions of Globe.

Panophthalmitis,	7
Mikrophthalmus,	1
Hydrophthalmus,	1
Phthisis bulbi,	37
Exophthalmus,	1
Intraocular tumor,	2

Affections of Percipient Apparatus.

Amblyopia,	73
" ex abusu,	11
Amaurosis,	7
Hemeralopia,	1

Refraction and Accommodation.

Myopia,	48
Hypermetropia,	91
Astigmatism,	6
Paralysis of Accommodation,	2
Presbyopia,	20
Asthenopia,	91

Muscular Affections and Neuroses.

Paralysis and paresis,	9
Diplopia,	12
Strabismus convergens,	72
" divergens,	9
Nystagmus,	7
Blepharospasmus,	6
Spasm of rectus superior,	1
Neuralgia 3d pair,	15
" 5th "	5
Ciliary neuralgia,	4
Herpes Zoster ophthalmicus,	1

Lachrymal Apparatus.

Epiphora, and obstruction of Lachrymal Ducts,	69
Affections of Lachrymal Passages,	112

Orbit.

Disease of,	5

General Injuries.

Foreign Bodies on Conjunctiva, Cornea and Sclera,	248
Burns,	31
Blows and Cuts,	144
Unrecorded,	46
Unfit,	27

Recapitulation of Diseases of the Eye.

Lids,	447
Conjunctiva,	1,258
Cornea and Sclera,	707
Iris,	163
Choroid,	71
Retina,	36
Optic nerve,	39
Vitreous,	34
Lens,	142
Globe,	49
Percipient apparatus,	92
Refraction and Accommodation,	258
Muscular affections and Neuroses,	141
Lachrymal apparatus,	181
Orbit,	5
General injuries,	423
Unrecorded,	46
Unfit,	27
Total,	4,119

Diseases of the Ear.

Abscess of Mastoid Process. . .	3
Neuralgia of External Ear, . .	3
Erysipelas of External Ear, . .	1
Tumor in front of Ear pressing on Meatus Externus,	1
Tumors of Lobe removed, . .	4
Abscess of Lobe, . .	2
Eczema of Meatus Externus and External Ear,	30
Abscess of Meatus Externus and External Ear,	34
Foreign bodies and Insects removed from External Meatus, . . .	16
Obstruction of Meatus Externus from Cerumen,	226
Furuncle in Meatus Externus, . .	9
Otitis Externa, . . .	111
Polypoid granulations in Meatus Externus and on Membrana Tympani, . . .	7
Polypi in Meatus Externus and on Membrana Tympani removed, . . .	39
Aspergillus Flavescens, . . .	1
Aspergillus Nigricans, . . .	1
Calcareous Degeneration of MembranaTympani,	5
Chronic perforation of Membrana Tympani,	20
Rupture of Membrana Tympani from blow on External Ear, ...	1
Obstruction of Eustachian Passage, . .	4
Chronic Aural Catarrh, . .	325
Acute Aural Catarrh, . .	122
Otitis media chronic and acute, . .	277
Myringitis, ...	8
Deafness from injury to Cranium, . .	2
Deafness associated with cerebral disease, .	2
Nervous Deafness, . . .	4

Disease of Labryrinth, ...	2
Deaf mutes, ...	12
Unfit, ...	21
Unrecorded, ...	13

Operations on the Eye.

Cataract.

Method of von Græfe(cataracta simplex)		46
" " " "	following irido-choroiditis,	2
" " " "	congenital cataract,	3
" " " "	traumatic "	2
Linear method, . . .		3
Discission		2—58

Iridectomy.

For artificial Pupil, . .	29
" Irido-choroiditis, . .	4
" Glancoma, . .	8
" Iritis old, . .	1
" Abscess of cornea, . .	5
" Anterior Staphyloma, . .	1—48

Posterior Synechia,	Passavant's operation,	16—16
Hernia of Iris,	. .	1— 9
Opaque capsule,	Agnew's operation for,	3
" "	removal of, .	9—12
Anterior Staphyloma,	Critchett's operation for,	1
" "	removal of, .	1— 2

Enucleation of Eye.

For Sympathetic Ophthalmia, .	16
" Anterior Staphyloma, . .	1
" Disorganized Eye, . .	3—20

Pterygium, Desmarres operation for,	5—	5
Strabismus Convergens, . .	37	
Strabismus Convergens alternating, .	4	
" " Secondary operation for,	1—	42
" Divergens, .	4—	4
Entropion, . .		9
Trichiasis, . . .		22
" Arlt's operation for,		4
Canthoplasty, . .		3
Symblepharon, modification of Teale's operation for,		1
Ptosis, . . .		1
Chalazion, . . .		14
Plastic of Lids, . .		1
Nœvus of Lid, . .		1
Removal of Foreign body from Iris,		3
Epithelioma of lid. . .		1
Removal of orbital Tumor. .		1
" Epithelioma of conjunctiva,		1
Exploratory operation for cyst of orbit,		1
Paracentesis of cornea,		13
Miscellaneous,		13
		297

GUSTAVUS HAY,
HASKET DERBY,
HENRY L. SHAW,
FRANCIS P. SPRAGUE,
B. JOY JEFFRIES,
ROBERT WILLARD,
CLARENCE J. BLAKE.

III. REPORT OF DR. B. JOY JEFFRIES.

On Operations for breaking up Attachments of the Iris to the Crystalline Lens or Posterior Synechiæ.

Professor Græfe in 1869 published in his Archives, a letter from Dr. S. Passavant explaining his method of operating to break away attachments of the iris to the lens capsule, which was, by "puncturing with a lance knife the anterior chamber at the edge of the cornea, passing in the iris forceps, grasping the iris, and by gently drawing, breaking away its attachment at the pupillary edge."

These cuts give the right and left pupil of one of the patients he operated on, while under the influence of atropine.

Right Pupil.



Left Pupil.



He says, "all these attachments were broken up with intervening periods of from three to eight or ten days, during which the patient went home and followed her home occupations. The first operation was done April 14, 1868, and the freeing of the last attachment June 15, 1868. The pupils are now round and perfectly movable. The magnifying glass shows spots of black pigment left on the anterior capsule, where the synechiæ were broken."

In explanation of this operation I would say, that these synechiæ or attachments from inflammation, of the iris to the lens capsule or cornea, are now considered the fruitful

source of repeated attacks of iritis, and their removal has been attempted in various ways. The danger to the lens and capsule has, however, till now almost prevented ophthalmic surgeons from interfering in the methods heretofore proposed and carried out.

Outside of its very great necessity and importance to the ophthalmic surgeon, I think other physicians and surgeons will be interested to learn how the eye tolerates such operative interference. I need not dwell on the effect of attachments of the iris to the capsule, I have always felt dissatisfied in seeing them left after iritis; now we have a safe and reliable means of breaking them away by grasping them with delicate forceps. I use a pair of moderately curved iris forceps, the teeth of which have been ground off and the points serrated. The more delicate their spring the less liable are we to pinch the iris too hard. Flowing off of the aqueous humor does not interfere, as the ends of the forceps are rounded and can be pushed between the iris and cornea without danger. I have so far found this operation unexpectedly easy, and certainly most satisfactory in result.

Iritis having just run its course would naturally seem to contra-indicate interference, but experience has so far shown differently. The following are the results of twenty operations performed by me at the Infirmary.

A woman, æt. 22, has had severe specific iritis in the left eye, the sequelæ of which are, several strong posterior synechiæ which atropine and the continued specific constitutional treatment have not broken up. The pupil is also covered by a film of deposit, much reducing vision and obscuring an ophthalmiscopic examination. Fig. 3 gives the pupil of the left eye dilated by atropine, showing the attachments of the iris to the capsule of the lens.

The film in the pupil is not shown. Fig. 4 shows the result of the operations.



Fig. 3.



Fig. 4.

The Passavant operations were as follows :

March 16, 1870.—Upwards and outwards.

" 22, " Upwards and outwards, on same synechia.

March 25, 1870.—Downwards and inwards.

" 29, " Downwards. Two were broken away.

April 2, 1870.—Upwards and inwards.

" 7, 1870.—Upwards.

" 15, 1870.—Upwards and outwards, where the first two were done, as the iris seemed to be fastened down quite to its insertion and the corneal opening was made far back, in order to be able to pull on the iris as near its periphery as possible. From this cut some blood flowed into the anterior chamber, obscuring a distinct view and thus preventing a second application of the forceps. In two days the blood was gone and the pupil round under atropine.

May 4, 1870.—The patient was discharged from operative treatment, the pupil freely movable, but without atropine varying a little from a circle up and out, where three attempts had been made to entirely remove attachment, as is shown in Figure 4 above. This synechia was broken *twice,* so far as the iris could be pulled. Whether

the iris does not here contract from exudation in its tissue, or is fastened down, I can not decide. I judge, however, the latter, as the rest of it responds readily to light. The pupil now is much clearer and the fundus can be well seen with the ophthalmoscope. Vision of course is correspondingly improved, no specific affection of the retina or choroid was noticed. The eye looks almost the same as the other, and is greatly improved in appearance. The three punctures of the cornea so close together have left a slight cicatrix, which will probably dissappear, or if not, is of no consequence cosmetically. The spots of pigment now seen on the capsule show where the synechiæ were. There is no film over the pupil, and it is a question whether the breaking away of the synechiæ by removing the connection of the deposit on the capsule in the pupil from the iris, did not hasten or facilitate its absorption. My own feeling was, that such a number of synechiæ and amount of lymph in the pupil would have ruined the eye, as I should have looked to the pupillary membrane becoming further organized.

A woman, æt. 38, has had severe specific iritis in both eyes, and, as sequelæ, a single synechia downwards in the left eye, whilst in the right there are several, some broader, others quite delicate close together.



Fig. 5.



Fig. 6.

Fig. 5 shows the synechiæ in the right pupil dilated by atropine. Fig. 6 shows the one in the left pupil under atropine. Continued atropine and constitutional treatment have failed to break these attachments, which do not show themselves in the right eye except under atropine. I did five Passavant operations on the two eyes, as follows:

March 25, 1870.—On the left eye, downwards, clearing the pupillary edge completely.

On the right eye, April 19, 1870.—Downwards, two were broken.

April 22, 1870.—Up and inwards.

" 26, " Down and outwards.

Although I anticipated being obliged to perform at least four operations on this, the right eye, these three sufficed to free the iris completely, two synechiæ being broken away together by opening the forceps wide enough to embrace them at once. May 4, 1870, the effect of the atropine has disappeared. Both pupils are perfectly round and movable, responding to light and shade. The patient continues under constitutional treatment for other signs of syphilis. All the synechiæ in this case gave away readily and no blood entered the anterior chamber, as I did not have to pull the iris, except at its pupillary edge, and so did not require my corneal cut to be where blood-vessels would be touched by the lance-shaped knife.

A woman, æt. 25, has had a severe specific iritis in the left eye, which having run its course, has left a posterior synechia downwards, that atropine and constitutional treatment do not break. Fig. 7 shows the shape of the left pupil under atropine.



Fig. 7.

May 18, 1870.—I broke this attachment by Passavant's operation, and the pupil became round and movable. The patient continued under constitutional treatment for syphilis.

A woman, æt. [?] 25-30, has had chronic irido-choroiditis and as sequelæ, some four or five attachments of the iris to the capsule. Around these the pupil dilates, showing the iris tissue to be still good. There is a constant trouble from the eye, aggravated I judge by the dragging of these posterior synechiæ. Therefore, under ether, I broke away two that were close together at the upper side. After breaking one, and the aqueous had escaped, I found no great difficulty in pushing the point of my closed forceps between the iris and the cornea, against which it of course laid, to reach the next one close beside it. In a few days I broke another at the opposite side of the pupil, also under ether. The patient was rendered quite sick and uncomfortable by the ether, so much so that I proposed to her trying to break the next without anæsthetic. This she consented to, and I succeeded without difficulty. She did not complain of the pain as being very great, the dragging on the iris seeming to be the most painful part; that it was not severe was certainly proved by her preferring to have the fourth and last operation done without ether. With a little care and command over the patient, I had no difficulty in holding the

eye sufficiently steady. A compressive bandage was each time left on over night. The aqueous humor is, however, much sooner re-secreted and the corneal wound closed The patient went back to her occupation in a store within forty-eight hours after the last operation, the eye being now hardly if any troublesome.

Another case was that of a man injured by the premature discharge of a blast. The face and eyes were full of powder. He has had traumatic iritis in the left eye, and atropine showed three broad posterior synechiæ. Both corneæ were so filled with powder, and the eyes in such a bad condition, that I judged it best to remove as many of the grains of powder as possible, and for that purpose kept him under ether some time, since he could not have held the globe still enough for me to work without. He was miserably sick from the ether, and dreaded taking it again. I therefore gladly availed myself of the kindness of Dr. Robert Amory, in offering to give the patient nitrous oxide gas. As he has reported on the special method of administering this anæsthetic, I omit speaking of it here, except to say that after the mouthpiece was removed, I had more than ample time to carry out my operation, time enough to have performed an iridectomy, or even a longer operation. For such short operations not followed by pain, I regard the nitrous oxide as invaluable. Passavant's operation has to be repeated as many times as there are widely separated attachments, and although I persuaded one patient to submit to it seven times under ether, we shall not always be so fortunate. The posterior synechiæ were so broad in this case, and the iris possibly friable, that I did not like to attempt to break them away without an anæsthetic for fear of the pain. The patient was perfectly satisfied

with the gas, experiencing no pain whatever. A compressive bandage was kept on a few hours after each operation. The three operations have resulted in leaving a free movable iris and pupil. Spots of pigment where the attachments were, are seen on the capsule. To what extent they will disappear I cannot attempt to say. Judging from previous cases, I think all lymph will be gradually absorbed.

A man, æt. sixty, has had granulations, ulcers of the corneæ, etc. The results are, central corneal opacity in the right eye, with anterior synechia, and a single posterior synechia downward in the left eye.

May 23, 1871.—An iridectomy for artificial pupil was done on the right eye, and a Passavant on the left, perfectly freeing the pupillary edge of the iris.

A man, æt. twenty-three, has run through with a fearful attack of syphilis, leaving as sequelæ, total posterior synechia and closed pupil in the left eye, and three or more attachments in the right.

May 6, 1871.—Iridectomy downward for artificial pupil was done on the left eye, and by a Passavant the attachment below broken in the right eye. Atropine now keeps *this clear* of the capsule, although there are still two attachments above.

May 30, 1871.—I made *two* corneal openings with a broad needle opposite the two attachments and broke them both one after the other. The flowing off of aqueous did not prevent my sliding the forceps between the cornea and iris without injuring the capsule. The two punctures did not cause the loss of a whole drop of aqueous fluid. This procedure, of course saved one additional operation.

A man, æt. 32, has in the right eye total synechia, lens

opaque, iris discolored, globe soft, vision gone—the result seemingly, of old irido-choroiditis. In the left eye there has lately been slight irido-choroiditis resulting in a rather broad synechia downwards,

May 30, 1871.—I broke this attachment by a Passavant's operation and the released iris gave a circular pupil. I looked upon this attachment, perhaps of old date, as a readily exciting cause of fresh inflammation.

In all these twenty operations I did no harm to the capsule, and certainly improved the condition of the eye In the second operation of the second case, owing either to the close and broad attachment or my not grasping the iris deeply and firmly enough, it was a little torn, and a filament dragged into the wound. It, however entirely replaced itself before the eye was bandaged, and no traces are now seen.

Instead of an iridectomy lance-shaped knife, I now use a broad paracentesis needle. I find no difficulty in manipulating my delicate forceps in the corneal wound this makes, and I lose but little aqueous before the iris is grasped, when the escape of the fluid rather assists in breaking the attachment. Atropine is continued, and the humor secretes so quickly, that there is no time for the iris to again fasten itself to the capsule. I have occasionally succeeded in not losing all of the aqueous humor during the whole operation.

ANNUAL REPORT

OF THE

SURGEONS

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

1873.

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President.

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REPORT OF THE PRESIDENT

OF THE

MASSACHUSETTS

CHARITABLE EYE AND EAR INFIRMARY

TO THE MANAGERS.

1872.

GENTLEMEN:— The Massachusetts Charitable Eye and Ear Infirmary has performed its beneficent work during the past year with unabated success, and in its accustomed quiet way. Its present condition, however, is a cause both of satisfaction and anxiety, — of satisfaction for the amount of good that has been done, and of anxiety, because the Institution has not been able to meet the increased demands that have been made upon it. A reference to the Surgeons' Reports of previous years shows that in 1867, the number of individuals who presented themselves at the regular hours of consultation was 3,918; in 1869, the number was 4,448; and in 1871, the number was 5,258; during the present year, 5,975 have presented themselves, exclusive of the occupants of beds in

the house. A similar rate of increase would raise the number of out-patients ten years hence to 10,000 annually. The financial resources of the Institution have not increased in an equal ratio with the patients.

Your Treasurer makes the following statement in his report: —

"The present condition of the Infirmary, financially, is far from satisfactory. We have run behindhand the past year 2,480 dollars, as 293 dollars, amount of bank-tax previously paid and since refunded, is included in this year's receipts. In estimating for the coming year, we cannot calculate upon any increase of income from our investments; our expenses, on the other hand, with the annual increase of patients, will be larger, and we shall probably have to report another deficiency at the end of the year of more than 3,000 dollars, unless lessened by some unexpected donations. The idea of encroaching upon our fixed investments for present support is inadmissible, as this would preclude the hope that this Institution will, in the course of time, with the annual State appropriation, become self-sustaining, in fully meeting the large demands of the future. Although liberal donations and legacies have been the chief source of its growth and prosperity, and though we have faith that their continuance will not fail in the long future as an abundant resource, yet the fact that the year has passed without any aid from these sources, shows how precarious is dependence upon them for immediate necessities. We shall continue to have ample means to give attention to all out-door patients that may ap-

ply for relief. It is the hospital accommodations required for those who must have medical treatment and in-door care, which cause nearly all the cost of carrying on the institution. We might readily make all right financially, by a charge to the house patients individually, corresponding to the cost of their board (the amount received from pay-patients the last year being only 548 dollars for the year), or by shutting off from house accommodations many of those who are now received gratuitously.

"Neither course would accord with the views of the Board, whose policy, on the contrary, has been not only to extend the benefits of the Infirmary to the greatest number of the poor, but to give proper care and treatment to the worst cases, by furnishing all the medical attention and accommodations essential to *success* in treatment. To change this policy now would be taking a long step backward. The alternative is to rely upon an increase of the State appropriation, or an appeal to the benevolent for contributions.

"We had indulged the belief that the current appropriation of the State, 6,000 dollars, would have been increased at least to an extent proportionate to the increased cost of supporting the Infirmary, and the increased demands upon it by the community (the patients increasing in number about ten per cent every succeeding year); but the last grant was limited to that of the preceding year. It is essential to the prosperity of the Infirmary, supported as it has been by the generosity of friends, and now de-

pendent upon their bounty for its growth, it being, too, a beneficiary of the State, that economy should continue to be a conspicuous feature of its management. The advantage of economy is not only in immediate gain, but it strengthens our claims to the attention of the benevolent, and will go far to secure their aid."

The report of your Board of Surgeons presents clearly, not only the labor which its members have performed, and the extent of the service which they have so efficiently rendered the community, but also the urgent demand for increased hospital accommodations, as shown in the accompanying extract from their report: —

"Within five years but few additional beds have been created, and the number of patients who can be accommodated in the building is still restricted to forty. Meanwhile, the operations for cataract alone have increased from thirty-four, in 1867, to sixty-four, in 1872. Room for them has only been obtained by rejecting cases, less urgent, but still in great need of careful nursing and constant treatment. Nearly fifty of these cases, entering the house blind and helpless during the present year, have been restored to useful vision, and thus prevented from passing the residue of their lives a burden to their friends, in the first instance, and indirectly to the community at large. They were all, it is needless to say, in humble circumstances, and entirely unable to have purchased the relief freely afforded them by the charity. No fact could be adduced which would more amply jus-

tify the aid extended to us by the State during so many years, and long, we trust, to be continued. The calls on us for assistance were never more urgent or as numerous as at present, the prospect of their increase at no time as sure. We need imperatively an additional number of beds for the patients, to whom a lack of room now obliges us to deny admission. For these beds we have ample space. The sixty-four blind from cataract in the present year, will have more than a hundred annual representatives ten years from now, at our present rate of increase. Cases of other serious diseases, requiring residence in the hospital for successful treatment, grow in proportion.

Such is the clinical and financial condition of the Massachusetts Charitable Eye and Ear Infirmary, an institution situated in a large and growing city, the business centre of a thickly settled and prosperous State. The calls upon its services have increased annually with the increased knowledge, on the part of the public, of the value of the treatment which it affords. It appears that the patients applying for relief belong almost exclusively to a class dependent upon their daily labor for the support, not only of themselves but of their families, and liable, in case of disablement from disease of the eye or ear, to become a burden upon the community and the State. In evidence of this, a reference to the tables of cataract operations alone, during the past year, shows 40 per cent of the cases to have been males who were still capable of labor.

That the demands upon the charity of the Institution are principally from the poorer classes in our immediate community, is shown by the fact that of the out-patients treated at the Infirmary during the past year, 95 per cent belonged in Massachusetts, and of this number about one half were residents of Boston; and that the increased demand comes largely from our immediate neighborhood is proved by a comparison with the report of 1872, which shows the number of out-patients from Massachusetts during this year to exceed by 357 cases the whole number treated during the year preceding.

II. STATISTICS.

Classification of Patients, Diseases, and Operations.

Out-Patients.

Whole No. eye patients	4,501
" " ear "	1,474
Total eye and ear patients	5,975
Males	3,226
Females	2,749
Residents of Boston	2,709
" " other parts of Massachusetts	2,900
" " Maine	133
" " New Hampshire	107
" " Vermont	32
" " Rhode Island	20
" " Connecticut	7
" " other States	32
" " British Provinces	29
" " Foreign Countries	6
	5,975

House Patients.

Males	280
Females	171
Total	451

Out-Patients Continued.

Eye Patients.		
Males	2,470	
Females	2,031	
		4,501
Ear Patients.		
Males	756	
Females	718	
		1,474
Total		5,975

Diseases of the Eye.

Lids.

Erysipelas	2
Eczema	12
Abscess	17
Blepharadenitis	217
Hordeolum	34
Chalazion	71
Ectropium	6
Entropium	10
Trichiasis	36
Distichiasis	1
Ptosis	4
Symblepharon	2
Œdema	9
Epithelioma	3
Warts	6
Nævus	1
Congenital defects	2
Xanthelasma	1
Lupus	2
Molluscum	1
Herpes	1

Conjunctiva.

Conjunctivitis, catarrhal	651
" blenorrhoic	15
" " neonatorum	14
" granular	441
' phlyctenular	166
Ecchymosis	14
Pterygium	23
Pinguecula	3
Œdema	2
Tumors	3
Abscess	1

Cornea and Sclera.

Keratitis	245
" traumatic	9
Abscess of cornea	4
Ulcer " "	345
Leucoma	115
Staphyloma anterior	33
Keratoconus	2
Tumor of cornea	1
Deposit of lead on	3
Arcus senilis	2
Sclero-keratitis	11
Scleritis	6
Tumor of sclera	1
Discoloration of sclera	1

Iris.

Iritis, rheumatic	122
" syphilitic	15
" traumatic	10
Prolapse	8

Dialysis	4
Wound of	2
Foreign body on	1
Coloboma	1
Mydriasis	13
Posterior synechia	9
Anterior "	5

Choroid.

Choroiditis	17
Sclerotico-choroiditis, posterior	13
Irido-choroiditis	15
" sympathetic	10
Glaucoma	15

Ciliary Body.

Cyclitis	1

Retina.

Hyperæmia	3
Retinitis	14
" albumenurica	13
" pigmentosa	2
" apoplectica	6
Separation of	13
Hyperæsthesia	2

Optic Nerve.

Congestion of disc	9
Neuro-retinitis	20
Atrophy	47

Vitreous.

Hemorrhage into	1
Membrane and opacity of	11

Foreign body in	4
Muscæ volitantes	16
Lens.	
Cataract, hard and soft	107
" incipient	18
" congenital	5
" traumatic	30
" capsular	4
" cretaceous	11
Dislocation	1
Lesions of Globes.	
Mikrophthalmus	1
Hydrophthalmus	3
Phthisis bulbi	35
Exophthalmus	2
Intraocular tumor	2
Affections of Percipient Apparatus.	
Amblyopia	70
Amaurosis	12
Hemeralopia	2
Nyctalopia	1
Refraction and Accommodation.	
Myopia	64
Hypermetropia	79
Astigmatism	6
Paralysis of accommodation	1
Presbyopia	27
Asthenopia	94
Muscular Affections and Neuroses.	
Paralysis and paresis	9
Diplopia	10

Strabismus convergens	66
" divergens	17
Neuralgia, 3d pair	4
" 5th pair	9
Ciliary neuralgia	9
Insufficiency internal recti	2

Lachrymal Apparatus.

Epiphora, and obstruction of lachrymal ducts	52
Affections of lachrymal passages	141
Abscess of lachrymal gland	1

Orbit.

Disease of	1

General Injuries.

Foreign bodies on conjunctiva	23
" " " cornea	335
Burns	44
Blows and cuts	141
Abrasion of cornea	6
Unrecorded	59
Unfit	59

RECAPITULATION OF DISEASES OF THE EYE.

Lids	438
Conjunctiva	1,333
Cornea and sclera	778
Iris	190
Choroid	70
Ciliary body	1
Retina	43
Optic nerve	76

Vitreous	32
Lens	176
Globe	43
Percipient apparatus	85
Refraction and accommodation	271
Muscular affections and neuroses	126
Lachrymal apparatus	194
Orbit	1
General injuries	549
Unrecorded	59
Unfit	59
	4,524

Operations on the Eye.

Cataract.

Method of Graefe (cataracta simplex)	64	
" " " following irito-choroiditis	1	
" " " " congenital cataract	1	
" " " " traumatic "	1	
Linear method	7	
Discission	6	
Removal of dislocated lens	2—82	
" " opaque capsule	1	
Agnew's operation for opaque capsule	3	

Iridectomy.

For artificial pupil	52	
" irito-choroiditis	1	
" glaucoma	9	
" iritis, old	1	
" abscess of cornea	3	
" anterior staphyloma	1	
" sclero-keratitis	7—74	

Posterior-synechia, Passavant's operation	4
Hernia of iris	5
Anterior staphyloma, Critchett's operation for	1
" " removal of	1
Iridotomy	1

Enucleation of Eye.

For sympathetic ophthalmia	18
" anterior staphyloma	3
" disorganized eye	14—35
Peritomy	2
Pterygium	5
Tumor of cornea	1
Tattooing of cornea	1
Paracentesis of cornea	22
Strabismus convergens	48
" " secondary operation for	1
" divergens	1
Entropion	3
Trichiasis	27
" Arlt's operation for	2
Canthoplasty	2
Chalazion	24
Plastic of lids	1
Nævus	1
Epithelioma of lid	4
" " conjunctiva	2
Removal of orbital tumor	3
" " foreign body in anterior chamber	1
Exploratory operation for cyst of orbit	1
Miscellaneous	20
Total	379

Diseases of the Ear.

Congenital malformation	2
Othœmatom (traumatic, spurious)	1
Fibrous tumor of lobe	1
Abscess of auricle	11
Obstruction of meatus from cerumen	246
Foreign bodies in meatus	16
Eczema of auricle and meatus	42
Exostoses of meatus	1
Wounds of meatus	2
Otalgia (auricle and meatus)	9
Otitis externa circumscripta	19
" " diffusa	115
Myringomykosis aspergillina	1
Myringitis	36
Calcareous deposits in membr. tymp.	10
Atrophy of membrana tympani	2
Rupture of " "	3
Destruction of " "	6
Perforation of " "	62
Otitis media purulenta	289
Polypi accompanying otitis media purulenta	42
Polypoid granulations in middle ear and on membrana tympani	71
Otitis media catarrhalis chronica	488
" " " acuta	107
" " " (serosa)	8
" " hypertrophica	3
" " hæmorrhagica	1
" intermittens	2
" neuralgica	16
" interna s. labyrinthica	10
" " associated with cerebral disease	4

Otitis interna associated with injury to cranium .	2
Tinnitus aurium " " cerebral disease .	6
Deaf-mutes	18
Unfit	19
Unrecorded	22

REPORT ON SIXTY-FOUR CATARACT EXTRACTIONS ACCORDING TO THE METHOD OF VON GRAEFE,

Performed at the Massachusetts Charitable Eye and Ear Infirmary, Boston, in the Year 1872, *by the Surgeons of the Infirmary.**

COMPILED BY

DR. HASKET DERBY, BOSTON.

THE amount of vision obtained has been, as far as possible, recorded. But it must be remembered that many of our patients come from a great distance, and are not in possession of the means to enable them to make a second visit to the city. The vision stated in the table is, therefore, in many cases that ascertained at the period of discharge, and may reasonably be supposed to have subsequently improved.

All our patients belong to the poorer classes, many of them being in an extremely destitute condition, and enabled to visit the Infirmary only by the charity of friends. It would be unfair, therefore, to institute a comparison between our figures and those of ophthalmic hospitals which contain private rooms designed to be occupied by the wealthy, whose superior health and greater powers of endurance are well known to furnish more favorable operative statistics. Could the surgeons of the Infirmary have included in this table the results of their private practice during the past twelve months, the percentage of success would doubtless have been materially increased.

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* Drs. Gustavus Hay, Hasket Derby, Henry L. Shaw, Francis P. Sprague, B. Joy Jeffries, Robert Willard.

ANALYSIS OF CASES OF CATARACT OPERATED UPON BY THE METHOD OF VON GRAEFE.

No.	Sex.	Age	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
1	male.	85	Oct. 12, '71.		Much inflammation, causing closure of pupil. Iridectomy five months later.	19 days.	v = $\frac{5}{100}$.
2	male.	80	Oct. 10, '71.	Normal.	Irido-choroiditis one week later.	21 days.	counts fingers.
3	male.	36	Oct. 20, '71.	Normal.	Did extremely well until the patient went out, contrary to orders. Severe inflammation and bleeding into anterior chamber ensued with immediate loss of vision.	24 days.	v = 0.
4	male.	40	Oct. 24, '71.	Normal.		21 days.	v = $\frac{20}{40}$.
5	female.	50	Oct. 31, '71.	Normal.		17 days.	v = $\frac{20}{50}$.
6	female.	50	Nov. 6, '71.	Normal.		18 days.	v = $\frac{20}{50}$.
7	male.	45	Nov. 3, '71.	Normal.	Did well till fourth day, when he left his bed and the ward, contrary to orders. Irido-choroiditis ensued.	27 days.	
8	male.	21	Nov 13, '71.	Normal.		19 days.	v = $\frac{12}{40}$.

No.	Sex.	Age.	Date.	Operation.	Remarks	Duration of Treatment.	Result.
9	male.	65	Nov. 23, '71.	Normal.		28 days.	v = $\frac{2}{3}$.
10	male.	61	Dec. 4, '71.	Normal.	Some opaque capsule remained in pupil.	16 days.	v = $\frac{10}{80}$.
11	female.	62	Dec. 11, '71.	Normal.		31 days.	v = $\frac{10}{80}$.
12	male.	54	Dec. 7, '71.	Normal.	Hemorrhage into anterior chamber in consequence of blow on eye.	30 days.	v = $\frac{20}{100}$.
13	female.	68	Dec. 8, '71.		Patient very restless, wound remained open several days.	29 days.	v = $\frac{5}{40}$.
14	male.	71	Dec. 14, '71.	Normal.	Patient did well till an attack of pyæmia supervened, which proved fatal.		
15	male.	22	Dec. 29, '71.	Normal.	Extensive sclerotico-choroiditis.	26 days.	
16	male.	41	Dec. 30, '71.	Normal.		18 days.	v = $\frac{10}{30}$.
17	male.	58	Jan. 2, '72.	Normal.	Some cortical substance remained in pupil.	17 days.	v = $\frac{10}{80}$.
18	female.	63	Jan. 4, '72.	Some vitreous lost.	Lens cretaceous and dislocated, much pain and inflammation ensued.	55 days.	v = 0.

19	male.	66	Jan. 5, '72.	Normal.		28 days.	v = $\frac{20}{60}$.
20	male.	63	Jan. 5, '72.	Normal.		4 days.	v = $\frac{15}{50}$.
21	female.	43	Jan. 11, '72.	Normal.	Some opaque capsule remained.	9 days.	Unrecorded.
22	male.	77	Jan. 11, '72.	Normal.		14 days.	v = $\frac{10}{60}$.
23	female.	63	Jan. 25, '72.	Normal.		26 days.	v = $\frac{10}{40}$.
24	male.	50	Feb. 1, '72.	Scoop used.	Capsule in pupil.	26 days.	v = $\frac{15}{50}$.
25	male.	63	Feb. 2, '72.	Normal.		18 days.	v = $\frac{20}{50}$.
26	male.	24	Feb. 13, '72.	Normal.	Much capsule in pupil; secondary operation June 3.	11 days.	v = $\frac{20}{30}$.
27	male.	52	Feb. 15, '72.	Normal.		15 days.	v = $\frac{20}{40}$.
28	male.	30	Feb. 26, '72.		Traumatic cataract, vision 19 days after operation $\frac{10}{60}$. Fundus subsequently became obscured through vitreous opacities which suddenly developed.	20 days.	
29	male.	24	Feb. 29, '72.		Traumatic cataract.	25 days.	v = $\frac{10}{60}$.

No.	Sex.	Age.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
30	male.	60	Mar. 16, '72.	Normal.		20 days.	v = $\frac{15}{100}$.
31	male.	60	Apr. 2, '72.	Normal.		15 days.	v = $\frac{10}{100}$.
32	male.	42	Mar. 15, '72.	Normal.		11 days.	v = $\frac{10}{60}$.
33	male.	79	Mar. 18, '72.	Normal.	Patient reads Snellen 1 with + $2\frac{1}{2}$.	23 days.	v = $\frac{1}{10}$.
34	male.	70	Mar. 20, '72.	Normal.	Severe attack of colic the night after operation. Suppuration of cornea ensued.	28 days.	v = 0.
35	male.	68	Mar. 22, '72.	Normal.	The iris was cut with the knife and folded in, so it was grasped with the forceps. Wound healed a little slowly. Patient reads Snellen 1 at 4 inches with + $2\frac{1}{2}$.	30 days.	v = $\frac{10}{40}$.
36	male.	62	Mar. 29, '72.	Normal.		25 days.	v = $\frac{1}{2}$.
37	male.	80	Mar. 29, '72.	Normal.		28 days.	v = $\frac{1}{2}$.
38	female.	43	Apr. 2, '72.	Normal.	Cataract followed a blow on temple received two years before. It was found to be soft.	16 days.	v = $\frac{20}{40}$.

39	male.	20	Apr. 4, '72.		Cataract consequent on an explosion of gunpowder, and preceded by iritis. Projection upwards deficient.	22 days.	
40	female.	53	Apr. 9, '72.	Normal.		32 days.	v = $\frac{20}{80}$.
41	male.	71	Apr. 12, '72.	Normal.	Patient reads Snellen 1 with +2½.	19 days.	v = $\frac{1}{7}$.
42	female.	64	Apr. 20, '72.	Normal.	A posterior polar cataract in a patient very feeble.	21 days.	v = $\frac{10}{100}$.
43	male.	55	Apr. 24, '72.		Cataract traumatic, preceded by iritis; and at time of operation partially absorbed.	23 days.	v = $\frac{9}{100}$.
44	female.	16	Apr. 27, '72.			16 days.	Unrecorded.
45	female.	62	May 3, '72.	Normal.		8 days.	v = $\frac{20}{40}$.
46	female.	72	May 2, '72.	Normal.	Iritis supervened, subsequently trachoma, necessitating long after-treatment. Patient reads Snellen 4½ with +2.	64 days.	v = $\frac{15}{60}$.
47	female.	50	May 3, '72.	Normal.		22 days.	v = $\frac{20}{20}$.
48	female.	64	May 8, '72.	Normal.	Projection inwards, before operation, uncertain.	19 days.	v = $\frac{20}{60}$.

No.	Sex.	Age.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
49	female.	58	May 8, '72.	Normal.	Catarrhal ophthalmia supervened.	41 days.	v = $\frac{1}{4}$.
50	male.	67	May 21, '72.	Normal.	Irido-choroiditis ensued.	31 days.	
51	male.	80	May 27, '72.	Normal.		13 days.	v = $\frac{20}{100}$.
52	male.	73	May 27, '72.	Normal.		19 days.	Unrecorded.
53	male.	68	June 1, '72.			26 days.	v = $\frac{20}{50}$.
54	male.	57	June 3, '72.	Normal.	Blow on eye six days after operation; much hemorrhage into anterior chamber.	24 days.	v = $\frac{15}{60}$.
55	male.	71	June 3, '72.	Normal.	Hemorrhage into anterior chamber and iritis, capsule in pupil; secondary operation proposed.	39 days.	v = $\frac{5}{50}$.
56	female.	69	June 18, '72.	Normal.	An invalid for years, imbecile, requires to be constantly attended by daughter.	15 days.	v = $\frac{10}{100}$.
57	male.	74	June 28, '72.	Normal.	Some opaque capsule remained in pupil.	14 days.	v = $\frac{10}{80}$.

58	female.	65	July 11, '72.	Normal.	Cortical substance remaining in pupil. To return for secondary operation, but failed to do so.	18 days.	Unrecorded.
59	female.	64	July 13, '72.	Normal.		14 days.	v = $\frac{25}{60}$.
60	male.	55	Aug. 6, '72.	Normal.		18 days.	v = $\frac{10}{100}$.
61	male.	63	Aug. 6, '72.	Normal.	Panophthalmitis Phth. Bulbi one eye from blow.	45 days.	v = 0.
62	female.	45	Aug. 10, '72.	Normal.	Large floating opacities found in vitreous.	17 days.	v = $\frac{15}{200}$.
63	male.	23	Aug. 8, '72.		Iritis ensued.	24 days.	v = 0.
64	male.	74	Sept. 18, '72.		Pupil dilated slowly and slightly under atropine at time of preliminary examination. Probable entire corneal suppuration.	Still under treatment Oct. 1, 1872.	

REMARK.—It would seem from the foregoing table, that the average duration of after-treatment of these cases was 22.6 days; such, however, was not in reality the case, as many patients from remote parts of the country were kept in the Infirmary some time after they were in a condition to leave it, in order that an approximation might be made to the glasses they would ultimately require, and the expense of a second journey from home be avoided.

SUMMARY.

In the majority of these cases the disease was senile, one case of posterior polar cataract occurring in a patient aged 64. Of the nine comparatively young patients, one suffered from a gunpowder explosion, one from a blow, one from a cut, and one was the subject of sclerotico-choroiditis posterior.

The patients who lost an eye were aged respectively 70, 63, 63, 36, and 23. Iritis and closure of pupil took place with one of 85. Irido-choroiditis with one of 80 and one of 67; hemorrhage into anterior chamber with one of 71, while one of 71 died of pyæmia.

During the healing process iritis happened 3 times, irido-choroiditis 3, vitreous opacities developed once, and in one case suppuration of the cornea supervened on an attack of colic. One patient went out prematurely, in disobedience to orders, and lost his eye.

Seven patients required a secondary operation:—

1 aged 85, for consequences of iritis.
1 " 71, for capsular obstructions.
1 " 61, " "
1 " 57, " "
1 " 50, " "
1 " 24, " "
1 " 21, " "

The results of vision are as follows. Each fraction is given as recorded, and, where not reduced to lowest terms, expresses of course the distance from the test in which the patient stood:—

$\frac{20}{20}$	1
$\frac{20}{30}$	1
$\frac{2}{3}$	1
$\frac{20}{40}$	2
$\frac{1}{2}$	4
$\frac{20}{50}$	4
$\frac{20}{60}$	2
$\frac{10}{30}$	1
$\frac{25}{60}$	1
$\frac{12}{40}$	1
$\frac{15}{50}$	2
$\frac{15}{60}$	2
$\frac{1}{4}$	1
$\frac{10}{40}$	2
$\frac{20}{80}$	1
$\frac{20}{100}$	2
$\frac{10}{60}$	3
$\frac{15}{100}$	1
$\frac{1}{7}$	1
$\frac{10}{80}$	4
$\frac{5}{40}$	1
$\frac{10}{100}$	4
$\frac{5}{50}$	1
$\frac{1}{10}$	1
$\frac{9}{100}$	1
$\frac{15}{200}$	1
$\frac{5}{100}$	1
$\frac{1}{2}$	1
0	5
Died	1
	54

Of the remaining ten unrecorded cases, two failed to present themselves for a secondary operation, which would undoubtedly have restored them to useful vision. One had had an attack of irido-choroiditis, and when last heard from was in an unpromising condition. The remainder left the Infirmary before their vision could be noted, or the records relating to them filled out.

STATISTICAL REPORT OF 1652 CASES OF DISEASES OF THE EAR,

TREATED AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY DURING THE YEAR 1872.

BY

DRS. CL. J. BLAKE, AND H. L. SHAW,

OF BOSTON.

CLASSIFICATION.

Congenital malformation	2
Othæmatoma (traumatic, spurious)	1
Fibrous tumor of lobe	1
Abscess of auricle	11
Obstruction of meatus from cerumen	246
Foreign bodies in meatus	16
Eczema of auricle and meatus	42
Exostosis of meatus	1
Wounds of meatus	2
Otalgia (auricle and meatus)	9
Otitis externa circumscripta	19
Otititis externa diffusa	115
Myringomykosis aspergillina	1
Myringitis	36
Calcareous deposits in membrana tympani	10
Atrophy of membrana tympani	2
Rupture of " "	3
Destruction of " "	6
Perforation of " "	62
Otitis media purulenta	287
Polypi accompanying otitis media purulenta	42
Polypoid granulations in middle ear and on membrana tympani	71

Otitis media catarrhalis chronica	488
Otitis media catarrhalis acuta	107
Otitis media catarrhalis serosa	8
Otitis media hypertrophica	5
Otitis media hæmorrhagica	1
Otitis intermittens	2
Otitis interna s. labyrinthica	10
Otitis interna associated with cerebral disease	4
Otitis interna associated with injury to cranium	2
Otalgia neuralgica	16
Tinnitus aurium, associated with cerebral disease	6
Deaf-mutes	18
Unfit	19
Unrecorded	22

NOTES TO THE PRECEDING TABLE,

By CL. J. BLAKE, M.D., OF BOSTON.*

The object of the following paper is to present such of the more interesting cases of disease of the ear as have been treated in the aural clinic during the past year. The fact that a large number of the patients come from distant parts of the State, renders it exceedingly difficult to keep an accurate record of results of treatment. This is to be regretted, as it diminishes the value of the statistics. The material afforded for observation, however, is so large, that individual cases of interest may readily be selected.

* The cases given in the table were treated in alternate quarters by Dr. Henry L. Shaw and myself, while the cases mentioned in the notes to the statistical report all occurred in my own clinic. I am greatly indebted to my colleague, Dr. Henry L. Shaw, for his observations in such cases mentioned in the above report as extended beyond my term of service.

CL. J. BLAKE.

Of the two cases of *congenital malformation*, the more interesting was that of the right ear in a girl three years of age, the left ear being perfectly normal, and the hearing good. In this case the long diameter of the auricle formed an angle of 45° with the vertical plane of the head; the position of the helix was barely indicated by a slight reduplication of the superior portion of the auricle, and the anti-helix represented by a slight elevation above the superior border of the concha; the whole of this portion of the auricle resembled that of the chimpanzee, or of the cases of dementia given by Prof. Laycock. The meatus was represented by a slight depression bounded anteriorly by a well-formed tragus, which latter was supplemented anteriorly by a small cartilaginous nodule, as in the cases described by Gruber. The perception for musical tones on this side of the head seemed to be good, and the integument covering the meatus could easily be depressed by means of a probe. Under these circumstances an exploratory operation was advised, but unfortunately the patient did not return at the time appointed. The family history gave no corresponding cases of malformation, and the patient herself was perfectly healthy and otherwise well developed.

The case of *spurious othæmatoma* occurred in a woman thirty years of age who received a severe blow upon the left ear from a fall, fracturing the cartilage and causing extravasation on both anterior and posterior surfaces of the auricle. Anteriorly the swelling extended from the fossa of the helix to the lower border of the concha, and posteriorly from the curve of the helix to about the centre of the concha.

Shortly after the accident, and following exposure, the auricle became red and painful; an opening one inch in length was made into the lower portion of the posterior swelling, resulting in the discharge of about one ounce of laudable pus, and the complete emptying of both sacs. The cavity was syringed with a weak solution of carbolic acid, and a cloth tent introduced; this was continued for about a week, after which, the walls of the sac being kept in apposition by means of compress and bandage, and the opening allowed to heal, the patient recovered rapidly with comparatively little deformity, the depression of the concha being only partially obliterated, and the elevation of the anti-helix being plainly discernible.

The *fibrous tumor* of the lobe occurred in a negro woman twenty-three years of age; that removed from the right lobe by means of the usual triangular cuts with the scissors was about an inch in diameter, and included the perforation which had been made for an ear-ring. The cuts were made to follow the outline of the tumor as closely as possible, and the edges brought together by means of straps, uniting by first intention for about a third of their extent, and healing finally with but little deformity. A fibrous tumor of nearly the same size was subsequently removed from the left ear of the same patient by Dr. Shaw.

Of the cases of *accumulation of cerumen* in the meatus in males, 39 occurred in the right ear, 53 in the left ear, and 59 in both ears; in females, 24 in the right ear, 33 in the left ear, and 27 in both ears. The average age of the cases collectively was 35 years. In the females, as a rule, the trouble had been of short duration, and the accumulated mass was soft and easily removed; in the males, on the other hand, the cerumen plugs were generally more firmly impacted, and the cerumen mingled throughout with fine dust or other foreign matter, which was sufficient, on closer examination, to indicate the occupation of the patient. Such cases occurred principally in coal-heavers and stokers, machinists, wood-turners, street-laborers, and stone-workers. The more obstinate cases were found usually in old men of the laboring class in whom there was a tendency to eczema of the auricle and meatus; in such cases it was the practice to soak the cerumen plug thoroughly with warm water, and then to pass a flattened probe between the ceruminous mass and the floor of the meatus to the depth of half an inch, thus making an opening for the entrance of the water in syringing.

Other instruments than the syringe were rarely employed in the extraction of these plugs, and as a preliminary treatment tepid water, as a rule, was found to be a better solvent than any of the solutions recommended by various writers. In clinical practice, where it is necessary to treat a large number of cases in a few hours, much time may be saved by filling the meatus with warm water, and introducing a large-sized Politzer's manometer, which may be refilled from time to time until the softening process is complete.

Among the more remarkable cases was one in a man 76 years of age; two firm plugs of cerumen filling the inner end of the meatus being found to be covered with a dense growth of aspergillus flavescens, the removal of the masses permanently relieved the symptoms characteristic of the presence of this fungus. The foreign bodies, consisting of beans, pins, insects, a piece of slate pencil, a round glass button and a small cockle-shell, were removed by syringing, with the exception of the three latter, in which it was necessary to resort to the forceps, the method of Löwenberg, and the blunt hook before the extraction could be effected.

Of the cases of *eczema of the auricle* and meatus, about 60 per cent. occurred in children under ten years of age, and of this number two-thirds were females, the disease affecting, as a rule, children of the very poor, poorly nourished, and unclean. The treatment in these cases consisted usually in the application of olive oil, which was allowed to remain over night, and washed off with weak warm soap-water in the morning; one or two applications were generally sufficient to soften the large crusts, and the subsequent treatment consisted principally in the use of the benzoated oxide of zinc ointment, as being more easy of application than any form

of wash, and in the more severe cases, in addition, a daily dressing of the parts affected with charpie dipped in a mixture of glycerine and water, to which the sulphocarbolate of zinc was sometimes added. In the adult cases the affection could usually be traced to exciting causes, among which the pernicious practice of cleansing the ear with a pin or ear-spoon played a prominent part.

The majority of the cases demanded general as well as local treatment, such as the use of tonics, preference being given to preparations of iron and quinine, and a more generous diet.

One of the cases of *wound of the meatus* occurred in a girl 11 years of age, who was recovering from a slight inflammation of the right membrana tympani. The point of a hard-rubber syringe had been thrust forcibly into the ear, tearing the integument of the meatus to the depth of half an inch, and rupturing the membrana tympani. The accident was followed by severe, deep-seated lancinating pain, accompanied by vomiting and occasional vertigo; the patient was brought to the clinic immediately after the occurrence of this accident, and an attempt to syringe the ear resulted in a severe attack of vomiting and considerable dizziness and dimness of vision. A leech was applied in front of the tragus, and instillations of warm water and the application of an ointment of the extract of hyoscyamus and morphia over the mastoid recommended. On the day following the pain was much relieved and the nausea and vertigo had not recurred; the tepid instillations were continued until the blood coagula had been entirely removed, when the wounds both of the meatus and membrana tympani healed readily with but slight impairment of hearing.

The second case was that of a laboring man, 36 years of age, who received a severe blow upon the region of the left mastoid, resulting in a slight wound of the meatus and an extensive rupture of the membrana tympani; there was considerable hemorrhage, which was followed one hour later by severe deep-seated pain, accompanied by nausea and

vomiting. On the second day a thin discharge appeared; this soon became purulent and offensive, and with the change in the character of the otorrhœa there occurred occasional attacks of vertigo, accompanied by deep-seated throbbing pain. At the time of admission the meatus was found to be somewhat congested, and the membrana tympani perforated, and giving passage to a copious purulent secretion. Syringing with the tepid water, the instillation of a warm solution of sulpho-carbolate of zinc, six grains to the ounce, and the internal administration of the hydrate of chloral relieved the pain and accompanying symptoms, and diminished the quantity and fetor of the discharge; the final result being a closure of the perforation and partial restoration of hearing.

The cases of *otitis externa circumscripta* were equally divided between males and females, the left being the affected ear in about 50 per cent of both. In both sexes the inflammation of the meatus accompanied some disturbance of the digestive organs, and was generally attended by constipation, in all but two or three cases there was a tendency to further development of furunculi, which was combatted by general treatment, including a gentle laxative, tonics, and a more generous diet. The local treatment consisted, as a rule, in free incision and subsequent syringing with warm water. The full development of furnuculi was sometimes prevented by the application of a saturated solution of nitrate of silver.

Of *otitis externa diffusa* over 57 per cent. were in females; the majority of the cases in both sexes occurring during the autumn and winter months, and affecting one side only.

As in the preceding affection something more than local treatment was required in most of the cases, the

patients being usually of the poorer class and ill nourished; in such as did not belong especially to this class, the trouble could be traced to some special cause, as direct injury to the part, or excessive exposure. Most of the patients had been suffering from severe pain for one or two days before applying for relief, and the disease was consequently at that stage which is characterized by extreme congestion and great tenderness, and to which the treatment recommended and employed by Gruber is especially applicable, namely, free incision of the congested parts, from one to three cuts, varying from a quarter to three quarters of an inch in length, being made from within outwards parallel to the long axis of the meatus, bleeding being encouraged by subsequent syringing with warm water. Aside from the almost immediate relief afforded by this method of treatment, it possesses the further advantage of arresting the progress of the inflammation, and preventing structural changes which might have a subsequent effect upon the hearing. One of its drawbacks is the possibility of the recurrence of granulations springing from the edges of the cuts. This complication, however, generally accompanies only cases in which the incision has been delayed until the parts have become œdematous.

The cases recorded under the heading *myringitis*, were those in which the membrana tympani was especially the seat of inflammation, and the affection being one which seldom occurs uncomplicated, a more careful record was kept with the view of ascertaining so far as possible the cause. Of the thirty-six cases recorded, 8

occurred in the month of August, all of them in males, of whom 7 were under thirty years of age; and in 5 of these the inflammation was directly traceable to sea-bathing as the immediate cause. In July there were 6 cases of myringitis, all of them in males, and in 2 cases traceable to sea-bathing. In March, April, and May preceding, there were no cases recorded.

In February, 4 cases, 3 being females. In January, 8 cases, 5 males and 3 females; of these latter, all of the males, with one exception, were under thirty years of age, and engaged in occupations which implied exposure to cold and wet, and to sudden changes of temperature.

In December, 2 cases, both females, the disease being directly traceable to exposure to inclement weather. A further review shows that those cases of myringitis occurring during summer months were principally in young males, and traceable to a cause pertaining at that season, while of the cases occurring during the winter months, more than half were females under thirty years of age; and of the males 50 per cent. were children under ten years of age, and the remainder young men whose occupations rendered them liable to exposure.

A comparison with private records confirms the conclusions which would be drawn from the above table with regard to the ætiology of myringitis; the majority of cases, during the summer months, occurring in young males during the season of sea-bathing, and more or less directly attributable to the effect of cold salt-water entering the ear; during the winter months myringitis occurred more frequently in young females with the

advent of snowy weather, and with the cold wet weather of spring-time, there being fewer cases, as a rule, in the interim during settled cold weather, and these cases occurring principally in males as the result of especial exposure. The majority of the cases applying at the Infirmary were in the acute stage of the disease, the membrana tympani being much congested and swollen, the point of insertion of the malleus being represented by a depression, and the inflammation being accompanied by considerable congestion of the meatus; the hearing had generally decreased to a minimum, being on an average from $\frac{1}{12}$ to $\frac{5}{12}$ for the watch. The immediate treatment in most of these cases consisted in *free scarification of the membrana tympani*, from two to four cuts being made in each case, the points selected for incision being those of greatest prominence or greatest degree of congestion, care being taken not to cut through into the tympanum. The amount of hemorrhage was in no case sufficientt to fill the inner end of the meatus, but the pain and sensation of fullness were almost immediately diminished and the hearing increased.

Subsequent treatment consisted in the use of the air-douche or catheter, preferably the former, and such general treatment and attention to the condition of the pharynx as the case required. As a rule, it was not necessary to repeat the scarification.

Of the cases of *otitis media purulenta* 51 per cent. were males of an average age of 21 years; the average age of females suffering from the same disease being 15 years; of males 20 per cent. and of females 36 per cent.

were under 10 years of age. In about 25 per cent. of these cases, in both sexes, the purulent inflammation was accompanied by the presence of granulations springing from the middle ear, or from the outer surface of the membrana tympani.

In the majority of these latter cases, the otorrhœa had persisted for a considerable time, but in a few patients in whom perforation of the membrana tympani and purulent discharge were found accompanied by well-marked granulations; the commencement of the disease dated back from two to three weeks only. Such cases occurred principally during the winter months in young males, and the granulations were generally noticeable for their exuberance, and for the readiness with which they disappeared under the application of nitrate of silver.

Among the more obstinate cases were two in which there existed in addition to perforation of the lower portion of the membrana tympani an opening above the short process of the malleus. In both of these cases the larger portion of the purulent discharge found its exit from the middle ear through the inferior opening, while the cavity above was filled with soft granulations, which could be reached only through the superior opening. In addition to the usual treatment, strong solutions of the sulpho-carbolate of zinc were injected through the latter perforation by means of a middle ear-syringe, and pledgets of cotton-wool soaked in a saturated solution of nitrate of silver were introduced every alternate day. Under this treatment the granulations finally disappeared, the discharge diminished, and a very vexatious complication was overcome.

The treatment in uncomplicated cases of purulent otorrhœa consisted in frequent and thorough syringing with tepid water and the instillation of solutions of the sulpho-carbolate of zinc, of from four to ten grains to the ounce; this double salt seems to have a more beneficial effect in such cases than solutions of the sulphate of zinc of the same strength, and possesses the still further advantage of more appreciably diminishing the fetor of the discharge.

In long-continued cases the saturated solution of nitrate of silver was applied with good results, especially in children, and in several cases where the discharge was distinctly muco-purulent Yearsley's treatment of packing the middle ear with dry cotton wool had a beneficial effect. In such cases it was the practice to cleanse the ear thoroughly by means of the air douche and syringing, and after drying to pass small pledgets of fine jewellers' wool through the perforation in the membrana tympani, packing them in by means of a probe. These could be easily removed on the following day and the packing repeated. The discharge gradually diminished in quantity and became more tenacious, so that towards the latter part of the treatment it became necessary to moisten the pledgets slightly before extracting.

Of the more serious cases of purulent inflammation of the middle ear there were none in which it became necessary to open into the mastoid cells, although redness, swelling and tenderness over the mastoid region were not rare accompaniments during the winter months. These patients were taken into the Hospital, if possible,

and leeches freely applied behind the ear, in each case with relief and a subsidence of the alarming symptoms.

Of the cases of *otitis media catarrhalis chronica* 52 p. c. were males, with an average age of thirty-five years; and 48 p. c. females, with an average age of thirty-four years; and in about 95 p. c. of the cases in both sexes tinnitus aurium was or had been a prominent symptom of the existence of disease. In addition to the usual application to the pharynx and naso-pharyngeal space ordinarily required in these cases, and the use of the air douche and catheter, with the injection of medicated solutions and vapors, repeated myringotomy was resorted to by the writer in several cases.

The cases chosen for this treatment were those in which the disease had persisted for a long time, the hearing being very considerably diminished and the Eustachian tube with difficulty permeable, the perception for sound conveyed through the bones of the head, however, being good, and the membrana tympani concave, thickened, and opaque, but without congestion, calcareous deposits or further structural change. The operation was performed with the adjustable myringotome, and repeated every third or fourth day, different portions of the membrane being chosen for each incision; during the experiment all other treatment, with exception of the use of the air douche, was suspended. In all cases the openings healed readily within forty-eight hours, and without perceptible improvement, until after the third or fourth incision had been made, when the Eustachian tube was found to have become much more readily permeable, the hearing to have increased in

varying degree, and in some cases the tinnitus aurium to have sensibly diminished. The theoretical grounds on which this treatment was instituted, and the reasons for improvement, probably are the diminished resistance to passage of air into the middle ear through the Eustachian tube, the membrana tympani being perforated; and, secondly, the irritation consequent upon the repeated incisions resulting in a diminution of the thickening of the membrana tympani. In none of the above cases was there any liberation of secretion in the middle ear by means of the incisions which would account for the improvement in hearing; these cases, moreover, improved still further under subsequent treatment by means of the catheter.

In the cases of *serous accumulation* within the middle ear, of which six were males and two females, myringotomy was also resorted to as the readiest means of arriving at an early termination of the disease, in all cases with beneficial results, and, so far as could be determined, without subsequent detriment to the hearing. In one case in which the peculiar form of sac described by Politzer* persisted after the liberation of the secretion, repeated incisions were made which resulted in a contraction of the sac and considerable improvement in hearing.

The two cases of *otitis intermittens* occurred in males who were subject to malarial fever. The affection was characterized by pain of a neuralgic character, conges-

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* Beleuchtungsbilder des Trommelfells. The Membrana Tympani in Health and Disease. Tr nslated by Drs. A. Mathewson and H. G. Newton. W. Wood & Co., New York. 1869.

tion of the membrana tympani, and accumulation of secretion within the middle ear; the attack was in each case coincident with general malarial symptoms, and followed the course of the febrile attacks in its increase and abatement. In both cases local treatment of the aural trouble gave no relief until supplemented by the administration of quinine, when the aural symptoms disappeared with the subsidence of the primary affection.

Of the cases of *deaf-mutism* 61 per cent. were males; in four of these cases the loss of hearing dated from an otitis media purulenta following scarlet fever, and in three cases, in which the membrana tympani was of normal appearance, the deafness was traceable to a disease, the symptoms of which agreed with those given by Voltolini* as characteristic of otitis labyrinthica.

In connection with the cases of perforation of the membrana tympani a series of *experiments* was instituted *with regard to perception of high musical tones*, a summary of which has already been published.† Cases in which it was necessary to perforate the membrana tympani were also availed of for the same purpose, the object being to account, if possible, for the discrepancy in the statements of various authors with regard to the limit of perception of high musical tones, and also the limit of such perceptions, and the conditions of the sound conducting portion of the ear favorable thereto.

For this purpose a series of König's rods of white tempered steel, ranging from 35,000 v. s. to 85,000 v. s.

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* Monatsschrift für Ohrenheilkunde.

† Transactions of the American Otological Society, 1872.

was employed, the rods being suspended at a uniform distance from the ear by means of loops of fine wire and set in vibration by a stroke from a steel hammer. The results obtained were such as not only to stimulate to still further investigation, but to establish the value of the instrument for diagnostic purposes. In the majority of the cases of chronic catarrhal inflammation of the middle ear the limit of perception terminated at 35,000 v. s.; in the exceptional cases it reached 40,000 v. s., and even 50,000 v. s., but in these cases the membrana tympani was found to be very concave, uniformly thickened, and varying its position but slightly under the action of either the air douche or catheter. This correspondence between the perception of a higher tone and a concave membrana tympani would be accounted for by the increased tension of a membrane of uniform thickness, responding more readily to shorter sound waves. The same point was illustrated in a case of *voluntary contraction* of the musculus tensor tympani.

The patient was a woman thirty years of age, who applied at the Infirmary for relief from a slight pharyngeal catarrh. The membrana tympani was transparent and of normal appearance, with exception of a slight central depression, the result of temporary closure of the Eustachian tube.

Upon voluntary contraction of the muscle the long process of the malleus was seen to move inwards, together with the central portion of the membrana tympani, the hearing for the voice and for all deeper tones diminished, and that for higher tones increased from 35,000 v. s. to 40,000 v. s.

The same observation was confirmed in another case occurring in private practice, in which the perception for high tones increased from 40,000 v. s. to 50,000 v. s.

during contraction of the musculus tensor tympani, the hearing for deeper tones proportionately decreasing. In this case the hearing was fully normal when the muscle was not voluntarily contracted. In cases of perforation of the membrana tympani in which the opening had become closed by the formation of a cicatrix, the perception for high tones was increased, provided, however, that the cicatrix was firm and tense; if at all relaxed the perception for higher tones seemed to be diminished; the only exceptions to this rule occurred in cases where the cicatrix was in contact with the descending process of the incus; in one case, in which a band of cicatricial tissue extended from the posterior edge of the perforation to the lower end of the long process of the incus a tone of 55,000 v. s. was distinctly heard. In two of the three cases of otitis media catarrhalis in which the test with the König's rods was supplemented by the application of the galvanic current the perception for high tones was increased 5,000 v. s. during the passage of the current, the cathode being applied in front of the ear and the anode held in the hand of the opposite side. The same increase of perception under the use of the cathode with from four to eight cells of a Stöhrer battery was found in corresponding cases in private practice.

Of the cases at the Infirmary during the past year in which *electricity* was employed either *as a means of diagnosis or of treatment*, two may be cited as showing especially beneficial results.

The first patient, a female, sixteen years of age, applied at the Infirmary, in July, for relief from deafness of the left ear, which had been

first noticed six years previously, and had gradually and steadily increased without tinnitus aurium or other subjective symptoms.

The watch (72 inches normal hearing distance) was not heard when pressed upon the auricle, or in contact with the head; the tuning-fork was heard only slightly. The meatus was normal, the membrana tympana somewhat concave, and very slightly opaque, and the Eustachian tube free. The general health was good, with exception of a slight tendency to constipation; the menses, which had appeared two years previously, were regular. The current from six cells of a Stöhrer battery was applied at intervals of three days, the cathode in each case being applied in front of the tragus; there was no dizziness and no subjective symptom, with exception of a slight ringing on the opening of the cathode. Following the first application of electricity, the hearing increased to contact for the watch, and continued to increase steadily with each application until the eighth sitting, having reached a distance of eighteen inches, when the patient unfortunately passed from observation.

In the second case, that of a woman thirty years of age, both ears were affected, the hearing having steadily diminished during a period of four years. Within three months there had been occasional tinnitus aurium. On both sides the meatus was normal, and the membrana tympani very slightly opaque, and somewhat concave. On the right side there was no perception whatever for the watch, while on the left the perception was good, and the watch was heard at a distance of four inches from the auricle. The general health was good, and there was nothing in the history or the appearances to account for the deafness, with exception of a slight catarrhal trouble of the middle ear; there was, moreover, no improvement in hearing following the use of the air douche.

No formula of reaction could be obtained on account of the vertigo accompanying the use of more than eight cells of the Stöhrer battery; but under the use of the cathode, with six cells, the hearing improved in the right ear to contact with the watch, and in the left ear to six inches for the watch.

The same current was applied at intervals of five days from August 5th to August 20th, at which date the hearing in the right ear re-

mained the same, but in the left ear had increased to twenty-eight inches. The patient was next seen on November 6th. The hearing had not diminished, and was still further increased to thirty-six inches.

It was necessary to refer many interesting cases of deafness associated with cerebral disease, and with injury to the cranium, to other institutions, on account of the necessity of retaining all available beds either for operative cases in the ophthalmic department, or for cases of accident requiring hospital treatment.

FORTY-EIGHTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

1874.

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1874.

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OF THE

MASSACHUSETTS

CHARITABLE EYE & EAR INFIRMARY.

1873-74.

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REPORT OF THE PRESIDENT

OF THE

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY

TO THE MANAGERS.

1873.

GENTLEMEN: — In reviewing the charitable work of the Eye and Ear Infirmary during the past year, we find added proof of the public value of such an institution, — a value which can hardly be overestimated when we consider the rapid growth of the city and the constant increase of a working population dependent upon daily labor for its support. A reference to the table of statistics shows an increase in the whole number of patients as compared with the previous year. The whole number treated in 1872 was 5,975, and in 1873, 6,283. Of these numbers 2,709, or about 45.3 per cent in 1872, and 3,223 or nearly 52 per cent in 1873, were from Boston alone. The percentage from Massachusetts remains nearly the same, that is, from 93 to 95 per cent. Aside from the facts presented in the tables of the Report of the Board of Surgeons, the records of the year show that the patients presenting themselves for treatment, while including many of the very poor, were largely of the artisan class, laborers and mechanics among the men, and shop-girls and needlewomen among the women, — a class of patients to whom the ability to work means not only the maintenance of

themselves, but often that of others dependent upon them. It is through this class that such an institution renders the greatest service to the community at large, and it is this class which, with each succeeding year, avails itself in increasing numbers of the service which the Eye and Ear Infirmary is happily able to render.

The above figures not only represent more eloquently than words can do the charitable work of the Infirmary for the past year, but they also show the amount of labor which the staff of surgeons has performed. It is not to be forgotten in this connection, that all this labor is not only cheerfully but gratuitously rendered. No salary is attached to the post of surgeon in the Eye and Ear Infirmary; each member of the staff gives his services to the institution, and so renders the community his debtor.

The following extract from the report of the surgeons presents in detail the work of the past year: —

"The whole number of persons applying for relief has been 6,283. This is an increase of 308 over the year preceding, the total for that year having been 5,975 (*vide* 46 Annual Report). These persons have presented a great variety of disease. On looking over the list for the eye, it will be noticed that affections of the conjunctiva are by far the most frequent, constituting a large proportion of the whole number. This delicate membrane, investing the exterior of the eyeball and inner surface of the lids, is particularly liable to suffer from out-door exposure or the effects of an impure atmosphere. The dwellings of the poor, placed in unhealthy situations, overcrowded and imperfectly ventilated, present nearly as irritating influences as the vicissitudes of the weather, to which their occupants are so often exposed. Hence, children, in these localities, suffer largely from this disease as well as adults. Fortunately, conjunctival inflammation, if taken in due season, is very

amenable to treatment; in proportion as it is neglected, however, it becomes more and more difficult of cure; and when suffered to go on unchecked leads to inflammation of other tissues, and consequent danger to sight. Some of the most hopeless and trying cases of eye-disease are instances of this neglect.

The large number of injuries to the eye will attract attention. The peculiar dangers to which a certain class of mechanics is exposed will be seen by looking under this head, where, in addition to a variety of other accidents, 343 cases of foreign body on the cornea are recorded. These foreign bodies are in most cases fragments of emery, iron, or steel, driven into the eye with sufficient force to imbed them in the tissue of the cornea. Stone-cutters, machinists, and all workers in metals are especially liable to suffer from such accidents. Whatever the offending substance may be, it usually gives rise to so much pain and irritation that relief is sought for at the earliest opportunity. If not promptly removed, serious and destructive inflammation is often the consequence.

There has been a large increase the past year in the number of patients with troubles of refraction and accommodation. Of these there were 396, while for the twelve months preceding the total was 271, as shown by report for that year. These affections are characteristic of those trades and occupations which require close and prolonged application of the eyes. Sewing-women belong to this class, and form a large majority of those who appear at the Infirmary for these troubles. Often unable to obtain other employment, the needle is their only means of support, and they are especially helpless when, from overtaxing, continued use of the eyes becomes impossible. In many of these cases, ability to resume work is obtained by means of glasses properly adapted to the special requirements of the eye. Unless so adapted, they are not only useless but injurious.

To speak in detail of the remaining diseases on the list would consume a large amount of time and space. There are many of them of great medical interest, requiring patient investigation and careful treatment, and would demand a minute description. The comments made above are merely to indicate some of the more prominent features of the work accomplished and the classes benefited thereby. The number of operations performed has been 340. From among these the cataract extractions, as being especially interesting and important, have been selected for extended notice.

There have been 69 of these operations. The results of 66 are presented in a separate table. Of the 3 remaining, 2 were linear and 1 by suction method. Of the linear extractions, case 1 was that of a female, aet. 21. Soft cataract. October 22, 1872. A linear incision combined with iridectomy was made, and lens removed. Capsule appearing thickened, an opening was broken through it by the cystitome. There was slight escape of vitreous, November 22. A month later, vision with a No. 3 convex glass was $\frac{10}{30}$. No. $2\frac{1}{2}$ of Snelling's test type could be read with convex glass No. $2\frac{1}{2}$. Case 2 was a male, aet. 28. Traumatic cataract. June 19, 1873. A partially soft lens, removed, through a linear incision. No iridectomy. Large piece of capsule also removed. July 24, 1873, vision with convex glass No. 4 was $\frac{20}{20}$. August 24, 1873, vision with convex glass No. $3\frac{1}{2}$, $\frac{20}{20}$.

The case in which suction was employed was that of a man, aet. 30. The right eye had been operated on, some years before, by an irregular practitioner Apparently reclination had been done. There was irido-choroiditis present. Vision was lost. The left eye presented a well-formed cataract. The lids of both eyes were granular. After a course of treatment to subdue the granulations, on August 11, 1873, a bent, broad needle was passed through

the cornea, two lines outward from its centre, and the capsule lacerated. The needle was withdrawn without loss ot aqueous. The point of suction instrument was then passed into lens, and suction made gently by the mouth. The lens substance flowed out readily, leaving a fair black pupil. The cornea collapsed immediately after withdrawing the instrument. No pain followed. Wound healed rapidly. August 23, vision was $\frac{10}{80}$, a result, under the circumstances, particularly gratifying." *

The following extract from the treasurer's report exhibits the financial condition of the Infirmary. The liberal appropriation of the State, and the legacies to the institution which have been received during the past year, have added largely to its efficiency; but even these are insufficient to meet the demands that are made upon it. We confidently hope that others will follow the example of those whose generous remembrances are recorded by the treasurer, and thus enable the Infirmary to do all the work that is required of it, and to do this work in the best way.

"We are relieved from the straightened circumstances which brought us to consider, in the last Annual Report, the possibility of having to contract the operations of the Infirmary, to bring them within the means at hand. And the way in which this relief has come is gratifying, as it assures our faith that private benevolence will not fail to

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* For the benefit of those not especially acquainted with the subject, it may be briefly explained that the amount of vision is measured by the ability to read letters of a certain size, at a certain distance. Thus the letters numbered 20 on the scale employed should be read by a normal eye at 20 feet. In such a case, vision equals $\frac{20}{20}$, or 1. The letters numbered 80 on the scale should be read at 80 feet. If read at 10 feet, vision equals $\frac{10}{80}$, or $\frac{1}{8}$. It should be added that many kinds of labor can be performed with vision far below what is taken as the normal standard. Of course, the place of the absent lens has to be supplied by a suitable convex glass.

supply the means, not only for its support, but for the extension of its charitable work."

"Besides the liberal appropriation by the State of $10,000 we have received $22,000 from the executors of the late Benjamin Hudson, the income of which will be available for current expenses. This unexpected bequest is by one who was moved to make this bestowal of a large portion of his estate by an appreciation of the importance and worth of the Infirmary, on self-judgment rather than from personal representations of any one specially interested in it. The usefulness and the needs of this charity furnished the sufficient appeal. Another accession to our funds, of $1,000, comes from the executors of the late John A. Blanchard."

Appended herewith are the statistics of both the Eye and Ear Patients of the Infirmary. The statistics of diseases of the Eye are followed by an interesting paper by Dr. H. Derby on the cataract operations performed by the surgeons during the past year at the Infirmary, which exhibits the degree of success that has attended these operations, and is an important contribution to the statistics of ophthalmology. The statistics of diseases of the Ear are followed by some valuable explanatory notes by Dr. C. J. Blake, which indicate the advance that aural surgery is now making.

EDWARD H. CLARKE, *President.*

STATISTICS.

Classification of Patients, Diseases, and Operations.

Out-Patients.

Whole No. eye patients	4,602
" ear "	1,681
Total eye and ear patients	6,283
Males	3,469
Females	2,814
Residents of Boston	3,223
" other parts of Massachusetts	2,627
" Maine	129
" New Hampshire	113
" Vermont	33
" Rhode Island	21
" Connecticut	8
" other States	27
" British Provinces	32
" Foreign countries	3
Unrecorded	67
	6,283

House Patients.

Males	243
Females	186
	429

Out-Patients (continued).

Eye patients —		
Males	2,501	
Females	2,101	
		4,602
Ear Patients —		
Males	968	
Females	713	
		1,681
Total		6,283

Diseases of the Eye.

Lids.

Erysipelas	6
Eczema	8
Abscess	19
Blepharadenitis	215
Hordeolum	31
Chalazion	69
Ectropium	7
Entropium	9
Trichiasis	29
Distichiasis	1
Ptosis	7
Symblepharon	6
Œdema	9
Epithelioma	3
Warts	7
Nævus	2
Xanthelasma	2
Lupus	2
Herpes Zoster Opthalmicus	2
Ulcer	2
Herpes	2

Rodent Ulcer	2
Tumor	10
Furuncle	2
Blepharitis	1

Conjunctiva.

Conjunctivitis, catarrhal	603
" blenorrhoic	13
" " neonatorum	12
" granular and pannus	269
" phlyctenular	227
Ecchymosis	22
Pterygium	23
Pinguecula	6
Œdema	4
Tumors	1
Abscess	1
Hyperæmia	38
Discoloration of conjunctiva from nitrate of silver	1
Ophthalmia, gonorrhœal	5

Cornea and Sclera.

Keratitis	243
" interstitial	13
" traumatic	6
Abscess of cornea	9
Ulcer " "	348
" " " vascular	14
Leucoma	127
Staphyloma anterior	13
Keratoconus	21
Deposit of lead	2
Sclero-keratitis	4
Episcleritis	2
Scleritis	4
Rupture of sclera	1

Iris.

Iritis, rheumatic	142
" syphilitic	14
" traumatic	13
Prolapse	10
Dialysis	1
Wound of	1
Foreign body on	1
Coloboma	2
Mydriasis	10
Posterior synechia	13
Anterior "	4

Choroid.

Choroiditis	19
" disseminata	4
Sclerotico-choroiditis, posterior	12
Irido-choroiditis	17
" " sympathetic	9
Glaucoma	20
Suppurative choroiditis	6
Staphyloma	1
Sarcoma	1
Albinism	1

Retina.

Hyperæmia	3
Retinitis	7
" albumenurica	6
" pigmentosa	4
" apoplectica	3
Separation of	13
Hyperæsthesia	3
Glioma	1
Œdema	1

Optic Nerve.

Congestion of disc	16
Neuro-retinitis	25
Atrophy	39
Neuro-retinitis specific	1

Vitreous.

Membrane and opacity of	15
Foreign body in vitreous and globe	7

Lens.

Cataract, hard and soft	108
" incipient	20
" congenital	7
" traumatic	27
" capsular	6
" posterior polar	3
Dislocation of	10
" of congenital	1

Lesions of Globes.

Mikrophthalmus	1
Hydrophthalmus	2
Phthisis bulbi	49
Exophthalmus	3
Intraocular tumor	2

Affections of Percipient Apparatus.

Amblyopia	74
Amaurosis	4
Hemeralopia	4
Nyctalopia	2
Amblyopia ex abusu	34
Muscæ volitantes	27

Refraction and Accommodation.

Myopia	100
Hypermetropia	128
Astigmatism	3
Presbyopia	42
Asthenopia	123

Muscular Affections and Neuroses.

Paralysis and paresis, 6th pair	2
" facial	3
Diplopia	13
Strabismus convergens	79
" divergens	16
Ciliary neuralgia	14
Insufficiency internal recti	2
Blepharospasm	7
Nystagmus	7
Neuralgia, 5th pair	6

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	88
Affections of lachrymal passages	108
Eversion of punctum	5

Orbit.

Abscess of	1
Cyst "	1

General Injuries.

Foreign bodies on conjunctiva	22
" " " cornea	343
" " " sclera	4
Burns	40
Blows and cuts	148

Abrasion of cornea	2
Unrecorded	64
Unfit	59

Recapitulation of Diseases of the Eye.

Lids	453
Conjunctiva	1,225
Cornea and sclera	787
Iris	211
Choroid	90
Retina	41
Optic nerve	81
Vitreous	22
Lens	182
Globe	57
Percipient apparatus	145
Refraction and accommodation	396
Muscular affections and neuroses	149
Lachrymal apparatus	201
Orbit	2
General injuries	682
Unrecorded	64
Unfit	59
	4,847

The seeming discrepancy in the number is accounted for by some of the patients presenting different forms of disease in the same eye.

Operations on the Eye.

Cataract.

Extraction, Method of Graefe, cataract senile	57
" " " traumatic	4
" " " soft	2

Extraction Method of Graefe, cataract shrunken,	1	
" " " following irido-choroiditis	2	
Extraction Method of Liebreich, cataract senile	2	
" Linear, " soft .	2	
Extraction by suction, " " .	1	
" of dislocated lens	4	
Discission, of cataract congenital . . .	10	
" " traumatic . . .	1	
		— 86
Removal of opaque capsule	14	
Noyes' double hook operation . . .	2	
		— 16

Iridectomy.

For artificial pupil	39	
" irido-choroiditis	3	
" glaucoma	9	
" iritis, old	3	
" anterior staphyloma	1	
" sclerokeratitis	1	
		— 56

Enucleation of Eye.

For sympathetic ophthalmia	14	
" hydrophthalmus	2	
" disorganized eye	8	
" intraocular tumor	2	
		— 26

Other Operations.

Passavant's operation for posterior synechiæ .	4
Removal of hernia of iris	5
" anterior staphyloma . . .	2
For cystoid cicatrix	1
Pterygium, Desmarre's operation (transplanting)	7
" removal of (excision) . . .	1

Tattooing of cornea	3
Paracentesis of cornea	4
Strabismus convergens	32
" " with external suture	12
" " secondary operation for	1
" divergens	1
" " with internal suture	1
" " bringing forward int. rectus	1
Entropion	1
Trichiasis	23
" Arlt's operation for	4
" Critchett's " "	6
Symblepharon, Teale's operation for	1
Canthoplasty	6
Plastic of lids	2
Chalazion	17
Epithelioma of lid	2
Abscess of orbit, with caries	1
" "	1
Tumor "	1
Miscellaneous	16
	—156
Total	340

REPORT ON SIXTY-SIX CATARACT EXTRACTIONS, BEING THOSE DONE BY THE METHODS OF VON GRAEFE AND LIEBREICH.

Performed at the Massachusetts Charitable Eye and Ear Infirmary, Boston, between October 1st, 1872, and October 1st, 1873, by the Surgeons of the Infirmary.

By Hasket Derby, M. D.

With two exceptions, these cases were all operated on according to the method of Von Graefe, and the preference of the surgeons of the institution for this operation may be inferred from the fact that they have, within two years, employed it 128 times. Each case has been carefully recorded, its after treatment noted, and the vision, at the time of leaving the house, estimated, generally by the operator himself. The date of testing vision has been entered on the table in every instance, and the possibility of subsequent improvement will of course be borne in mind.

3 cases were traumatic, 2 were dependent on manifest choroidal disease, and 2 occurred in young subjects of respectively 24 and 26 years. The senile cataracts proper were 59 in number, one of them being immature and 2 hypermature. 44 of these recovered vision of at least $\frac{1}{10}$, which fraction has been, with what justice each must decide for himself, taken by various ophthalmic surgeons as the measure of a full success. 6 recovered useful vision, — a vague term, which we may take to mean the ability to at least go about unattended. 7 were to return for a secondary operation. Of these, 6 had suffered from iritis, and consequent closure of the pupil, but everything promised an

ultimate restoration of vision when the iridectomy or capsule operation should have been performed. In the remaining case (No. 52), irido-choroiditis came on after the discharge, which had taken place at the patient's own request and in opposition to the earnest wish of the surgeon. He returned but once, and was then lost sight of. The ultimate issue was doubtful. Finally, two entire failures occurred (cases 11 and 42), and the record gives, in the former instance at any rate, a sufficient reason for the result which was, from the first, apprehended.

The remaining 7 operations were performed on 3 traumatic cataracts, 2 resulting from tangible choroidal disease, 1 unripe at 26, and 1 shrunken at 24, with the following results:

Traumatic.	*Choroidal Disease.*	*Unripe.*	*Shrunken.*
V = $\frac{20}{20}$	$\frac{2}{80}$	$\frac{20}{30}$	$\frac{20}{60}$
V = $\frac{20}{100}$	$\frac{1}{\infty}$		

* Still under treatment.

These 7 operations are, for obvious reasons, to be entirely separated from the 59 for senile cataract; and their results are not given for the sake of any direct evidence they offer in favor of the peripheric linear method.

57 of the operations for senile cataract were done according to the method of Von Graefe, 2 by that of Liebreich. The first of the latter was able to leave the house in twenty-one days with an anterior synechia and a vision ot $\frac{15}{100}$. In the second, a large prolapse of the iris was excised five days after the operation, convalescence lasted nineteen days, and vision was $\frac{15}{80}$ at the end of that time. Our experience here, as well as in private practice, has given us no ground for abating our theoretical objections to this method. A failure to remove the entire corti-

cal substance and prolapse of the iris are the accidents most to be dreaded, the latter especially in a country where anæsthesia is so justly considered nearly indispensable to both patient and surgeon.* Whether general muscular relaxation favors prolapse of the iris or not, the straining consequent on nausea unquestionably predisposes to it, and while nausea is of frequent occurrence we can call to mind no instance in which it has proved injurious after the performance of Von Graefe's operation.

The cases here analyzed occurred during the terms of service of six separate surgeons, and can hence hardly be said to have been operated on in an absolutely uniform manner. The only serious divergence, however, from the general plan laid down by our illustrious master has been, especially of late, in the direction of the modifications practised by De Wecker, such as a slightly greater departure from a linear cut, the removal of a smaller piece of iris, and the non-instillation of atropine either before or after the operation, unless demanded by some inflammatory complication. We all adhere, substantially, to the peripheric linear method.

Hemorrhage into the anterior chamber during the operation was a not infrequent accident, and always readily controlled by the application of soft, moist sponges, that had been kept in contact with a lump of ice. Vitreous was lost in 7 cases, generally in small amount. It presented, but did not escape, in 3 others, and in 2 of these the lens had to be removed by means of a scoop, to avoid the threatened accident. In short, prolapse of vitreous has been noted but 12 times in 128 of Graefe's operations done at the Infirmary during the last two years; sympathetic ophthalmia has not once resulted from

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* Ether was administered in all the operations here reported on.

this form of extraction. These facts are cited to aid in disposing of two objections that have been made to the method, and to show that these accidents are at least as little likely to occur as after ordinary flap extraction. With reference to the subsequent development of pupillary obstructions, and to the increasing density of membranes that seem to form some time after the original operation, candor compels the writer, individually, to draw a comparison somewhat unfavorable to Graefe's method, as far, at least, as his experience has gone. This amounts only to the expression of an opinion that a flap operation *that succeeds* does somewhat better, subsequently, than the other, a greater risk being taken for the sake of an increased gain.

Where the cataract was double, a reasonable interval was, in every case, allowed to elapse between the two operations.

Iritis occurred in 7 instances and caused closure of the pupil in 6 of these. As has been already stated a secondary operation promises in each a good result, and it is much to be regretted that the stated time at which this report must appear prevents our carrying out the history of these cases.

The results of vision are as follows: — Each fraction is given as recorded, and, except in one instance ($V\frac{1}{24}$) expresses the distance from the test in which the patient actually stood. Snellens and Dyer's types were the test employed, appropriate convex glasses were of course used. The propriety of not reducing the fractions to their lowest terms will be manifest on reference to the table, where it is seen that patients who made out XXX in 10′ could not distinguish LX in 20′; those who saw XL in 10′ lost sight of XX in 80′, etc. The uncertainty of testing for the near, *i. e.* of expressing vision by the size of the type made out at a reading distance, is seen by referring to cases 40 and 41. Both read Snellen $1\frac{1}{2}$, yet one had $V\frac{20}{80}$, the other $V\frac{20}{30}$; case 45

has $V\frac{20}{40}$, reads Snellen 2; while case 60 has $V\frac{40}{80}$ and reads Snellen $1\frac{1}{2}$.

$\frac{20}{20}$	1	$\frac{20}{100}$	11
$\frac{20}{30}$	2	$\frac{15}{80}$	1
$\frac{20}{40}$	3	$\frac{15}{100}$	1
$\frac{14}{30}$	1	$\frac{10}{80}$	4
$\frac{15}{40}$	2	$\frac{10}{100}$	5
$\frac{20}{60}$	2	$\frac{8}{100}$	1
$\frac{10}{30}$	1	$\frac{5}{80}$	1
$\frac{15}{50}$	1	$\frac{10}{200}$	1
$\frac{20}{80}$	4	$\frac{1}{24}$	1
$\frac{10}{40}$	2	$\frac{2}{100}$	1
$\frac{5}{20}$	1	$\frac{1}{8}$	8
$\frac{12}{50}$	1	$\frac{1}{0}$	2
$\frac{15}{70}$	1		59

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
1	F.	55	Senile.	Oct. 8, '72.	Normal.		20 days.	$v = \frac{10}{40}$. (Oct. 28.)
2	F.	62	Senile.	Nov. 15, '72.	Normal.		18 days.	$v = \frac{20}{100}$. Reads Sn. 2. (Dec. 3.)
	M.	80	Senile.	Oct. 22, '72.	Some cortical left behind.		8 days.	$v = \frac{20}{60}$. Sn. 2. (Dec. 7.)
4	M.	60	Senile.	Nov. 15, '72.	Slight loss of vitreous.	Iris healed into wound, causing some irritation and protracting convalescence.	14 days.	$v = \frac{10}{100}$. Sn. $3\frac{1}{2}$. (Dec. 15.)
5	M.	50	Senile.	Nov. 15, '72.	Operation very difficult, owing to deep-set position of the eye.	Patient restless and frequently removed bandage. Irritative iritis followed, closing pupil. To return for secondary operation.	64 days.	$v = \frac{1}{8}$. (Dec. 29.)
6	M.	51	Senile.	Nov. 16, '72	Liebreich's operation; much cortical left behind.	A slight anterior synechia resulted. At time of discharge, much capsule in pupil. To return for a secondary operation.	21 days.	$v = \frac{15}{100}$. Sn. 2. (Dec. 7.)
7	M.	45	Resulting from old disease of choroid of 25 years' standing.	Dec. 6, '72.	Much opaque capsule removed.	Projection only outwards. Operation done only at request of patient.	14 days.	$v = \frac{2}{80}$. (Dec. 20.)

8	M.	53	Senile.	Dec. 20, '72.	Lens removed with scoop, in its capsule, a slight loss of vitreous taking place before excision of iris.		42 days.	v = $\frac{20}{20}$. Sn. $1\frac{1}{2}$ (April 17.)
9	F.	50	Senile.	Dec. 25, '72.	Liebreich's operation. A prolapse was found, five days later, to exist and was excised.		19 days.	v = $\frac{15}{20}$. Sn. $2\frac{1}{2}$ (Feb. 27.)
10	F.	68	Senile.	Dec. 30, '72.	Normal.	Very restless during after treatment.	15 days.	v = $\frac{10}{40}$. Sn. 2 (Jan. 14.)
11	M.	78	Senile.	Jan. 1, '73.	Normal.	Patient in feeble health, childish, and with an intermittent pulse. Operation at first declined, done finally at his urgent request. Panophthalmitis resulted.	45 days.	v = $\frac{1}{0}$. (Feb. 15.)
12	F.	44	Senile.	Jan. 16. '73.	Normal.	Patient childish, constantly removed bandage to "feel whether eye had healed." Kerato-iritis and closure of pupil resulted. Ordered to return for a secondary operation.	27 days.	v = $\frac{1}{8}$. (Feb. 11.)

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
13	M.	52	Result of irido-choroiditis.	Feb. 10, '73.	Normal.	No projection was made out before operation.	19 days.	v = $\frac{1}{8}$. (Feb. 24.)
14	M.	60	Senile.	Feb. 24, '73.	Normal.	Iritis resulted in closure of pupil. Double hook operation, June 19.		v = $\frac{20}{100}$. (Aug. 28.)
15	F.	40	Senile.	Feb. 26, '73.	Normal.		12 days.	v = $\frac{20}{100}$. (March 10.)
16	M.	60	Senile.	Mar. 16, '73.	Normal.		13 days.	v = $\frac{15}{40}$. (May 1.)
17	M.	24	Traumatic.	Mar. 14, '73.	Normal.		6 days.	v = $\frac{20}{20}$. Sn. $1\frac{1}{2}$ (March 27.)
18	M.	57	Senile.	Mar. 19, '73.	Normal.		23 days.	v = $\frac{20}{100}$. Sn. $2\frac{1}{2}$ (April 9.)
19	F.	47	Senile.	Mar. 25, '73.	Slight loss of fluid vitreous.	Lens shrunken, iris tremulous, central and lateral projection very uncertain.	10 days.	v. cannot be measured on letters. Can get about alone with this eye. (Sept.)

20	F	66	Senile.	April 3, '73.	Much hemorrhage into anterior chamber. Vitreous presented and cortical substance had to be left.		13 days.	V = $\frac{20}{100}$. (May 3.)
21	F.	66	Senile.	April 16, '73.	Cortical left behind, owing to danger of escape of vitreous.	At time of discharge the cortical substance in anterior chamber was rapidly absorbing.	17 days.	V = $\frac{8}{100}$. (May 3.)
22	F.	63	Senile.	April 7, '73.	Normal.	Iritis occurred, without apparent cause, on 6th day, causing closure of pupil. Iridotomy done Sept. 22. Vision daily improving at time of discharge.	30 days.	V = $\frac{1}{6}$. (Oct. 4.)
23	M.	52	Senile (shrunken, dating back 10 years).	Apr. 11, '73.	Scoop used to prevent threatened escape of vitreous, which, notwithstanding, escaped in considerable quantity.	Threatened corneal suppuration.	19 days.	V = $\frac{1}{24}$. (May 1.)
24	F.	40	Senile (hard).	Apr. 18, '73.	Normal.		20 days.	V = $\frac{20}{100}$. (May 27.)

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
25	F.	50	Senile.	Apr. 29, '73.	Some cortical left in pupil, to avoid risk of loss of vitreous.		32 days.	$v = \frac{20}{40}$. (May 31.)
26	F.	50	Senile.	Apr. 29, '73.	Normal.		19 days.	$v = \frac{20}{30}$. Sn. 1. (May 18.)
27	F.	65	Senile.	May 3, '73.	Much vitreous lost. Scoop had to be introduced several times.	Iritis 5th day, causing closure of pupil. Very good perception of light at time of discharge; to return for secondary operation.	26 days.	$v = \frac{1}{8}$. (May 27.)
28	M.	59	Senile.	May 2, '73.	Vitreous presented. To avoid its escape, scoop was introduced, and lens removed in its capsule.	Some floating opacities in vitreous at time of discharge.	23 days.	$v = \frac{20}{80}$. Sn. $4\frac{1}{2}$. (May 25.)
29	M.	47	Senile.	May 10, '73.	Normal.		16 days.	$v = \frac{20}{80}$. Sn. 8. (May 26.)
30	M.	79	Senile.	May 10, '73.	Normal.	Thickened capsule in pupil. Secondary operation Sept. 6.	13 days.	$v = \frac{10}{100}$. Sn. 12. (Sept. 13.)

31	F.	65	Senile.	May 10, '73.	Normal.		12 days.	V = $\frac{15}{70}$. (June 17.)
32	F.	65	Senile.	May 20, '73.	Slight loss of vitreous, some cortical left behind.	Pupil filled with capsule. Agnew's operation Sept. 20.	29 days.	V = $\frac{10}{100}$. (Sept. 29.)
33	F.	63	Senile.	May 9, '73.	Normal.		22 days.	V = $\frac{20}{40}$. (May 31.)
34	F.	26	Unripe.	May 16, '73.	Some opaque capsule left behind.	V. at time of discharge, only $\frac{15}{70}$.	15 days.	V = $\frac{20}{30}$. (Oct. 6.)
35	M.	60	Senile.	May 21, '73.	Normal.		11 days.	V = $\frac{20}{100}$. (June 9.)
36	M.	60	Senile.	May 27, '73.	Normal.		13 days.	V = $\frac{20}{100}$. (June 9.)
37	M.	66	Senile.	May 22, '73.	Normal.	Iritis 14th day.	28 days.	V = $\frac{10}{100}$. Sn. 9. (June 19.)
38	F.	53	Senile.	May 21, '73.	Normal.		12 days.	V = $\frac{20}{100}$. (June 17.)
39	F.	53	Senile (unripe).	May 27, '73.	Normal.		20 days.	V = $\frac{20}{100}$. (June 17.)

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
40	M.	57	Senile.	May 24, '73.	No anterior chamber at time of operation; increased tension.		23 days.	v = $\frac{20}{80}$. Sn. $1\frac{1}{2}$. (June 16.)
41	M.	64	Senile.	May 26, '73.	Normal.		12 days.	v = $\frac{20}{30}$. Sn. $1\frac{1}{2}$. (Sept. 11.)
42	M.	70	Senile.	June 4, '73.	Some cortical left behind.		16 days.	v = $\frac{15}{40}$. (July 20.)
43	F.	51	Senile.	June 4, '73.	Normal.	Granular disease of each eye of long standing. Muco-purulent discharge the day following operation. Panophthalmitis ensued.	42 days.	v = $\frac{1}{0}$. (July 16.)
44	F.	64	Senile.	June 7, '73.	Normal.		13 days.	v = $\frac{10}{80}$. (June 20.)
45	M.	68	Senile.	June 7, '73.	Normal.		19 days.	v = $\frac{20}{40}$. Sn. 2 (June 26.)
46	F.	47	Senile.	June 17. '73.	Normal.	Large patch of sclerotico-choroiditis posterior subsequently discovered.	11 days.	v = $\frac{5}{20}$. (July 26.)

47	F.	55	Senile.	June 18, '73.	Normal.		18 days.	$v = \frac{14}{30}$. (July 6.)
48	M.	60	Senile.	June 19, '73.	Normal.	Patient generally rheumatic, fingers all distorted. Iritis came on on 8th day, nearly closing pupil. To return for secondary operation.	15 days.	$v = \frac{2}{100}$. (Aug. 28.)
49	F.	48	Senile.	July 2, '73.	Normal.		20 days.	$v = \frac{20}{60}$. Sn. 3 (Sept. 16.)
50	M.	24	Shrunken.	July 11, '73.	Normal.		19 days.	$v = \frac{20}{60}$. (Aug. 8.)
51	M.	60	Senile.	July 21, '73.	Normal.	Very unruly; insisted on leaving bed a few hours after operation.	16 days.	$v = \frac{10}{80}$. (Aug. 3.)
52	M.	48	Senile (partially fluid).	July 23, '73.	Normal.		8 days.	$v = \frac{12}{50}$. (Oct. 15.)
53	M.	62	Senile.	July 23, '73.	Slight loss of vitreous.	Did well, and discharged Aug. 4; able to count fingers in 2′. Irido-choroiditis came on Aug. 7. Patient returned for consultation, and was then lost sight of.	12 days.	$v = \frac{1}{8}$. (Aug. 4.)
54	M.	34	Traumatic.	July 29, '73.	Cut small; scoop had to be used.		14 days.	$v = \frac{20}{100}$. Sn. 3. (Aug. 12.)

No.	Age.	Sex.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
55	M.	51	Senile (lens shrunken).	Aug. 4, '73.	Iris broke away from its attachments, and nearly all came away, though no force was used.		11 days.	v = $\frac{10}{80}$. (Aug. 30.)
56	F.	58	Senile.	Aug. 12, '73.	Some capsule left in pupil.		16 days.	v = $\frac{10}{200}$. (Aug. 28.)
57	F.	69	Senile.	Aug. 21, '73.	Normal.		13 days.	v = $\frac{10}{80}$. Sn. $6\frac{1}{2}$. (Sept. 3.)
58	M.	60	Senile.	Aug. 23, '73.	Normal.		15 days.	v = $\frac{15}{50}$. (Sept. 7.)
59	F.	48	Senile.	Sept. 4, '73.	Much capsule left behind.	Slight iritis followed at time of discharge, pupil blocked by capsule. Excellent perception of light. To return for secondary operation.	17 days.	v = $\frac{1}{8}$. (Sept. 21.)
60	M.	58	Senile.	Sept. 8, '73.	Normal.		20 days.	v = $\frac{20}{80}$. Sn. $1\frac{1}{2}$. (Sept. 28.)

61	M.	66	Senile.	Sept. 19, '73.	Normal.	Threatened general suppuration with difficulty averted. At discharge pupil closed. Excellent perception of light. To return for secondary operation.	33 days.	$v = \frac{1}{\infty}$. (Oct. 16.)
62	F.	55	Senile.	Sept. 5, '73.	Normal.	Iritis 5th day, had several relapses. Patient obliged to leave.	17 days.	$v = \frac{5}{80}$. (Sept. 22.)
63	M.	49	Senile.	Sept. 11, '73.	Normal.	Several violent attacks of pain during convalescence.	26 days.	$v = \frac{10}{30}$. (Oct. 7.)
64	M.	57	Senile.	Sept. 22, '73.	Normal.		17 days.	$v = \frac{20}{100}$. (Oct. 5.)
65	M.	27	Traumatic.	Sept. 17, '73.	Normal.		24 days.	
66	F.	63	Senile.	Sept. 23, '73.	Normal.		22 days.	$v = \frac{10}{100}$. (Oct. 15.)

STATISTICAL REPORT OF 1729 CASES OF DISEASES OF THE EAR.

Treated at the Massachusetts Charitable Eye and Ear Infirmary during the year 1873.

CLASSIFICATION.

Tumors of lobe	1
Abscess of auricle and meatus	21
Erysipelas " " "	1
Eczema " " "	36
Wounds " " "	2
Otalgia " " "	6
Obstruction of meatus from cerumen	249
Foreign bodies in meatus	11
Exostosis of meatus	2
Otitis externa circumscripta	21
Otitis externa diffusa	43
Aspergillus	3
Myringitis	33
Calcareous deposits in membrani tympani	7
Rupture of membrani tympani	3
Destruction of " "	2
Perforation of " "	10
Polypoid granulations on tympani	25
Otitis media purulenta	374
" " " with abscess of mastoid process	4
" " " with polypi	41
Otitis media catarrhalis chronica	574
Otitis media catarrhalis acuta	117

Otitis media catarrhalis serosa	9
Otitis interna s. labyrinthica	7
Otitis interna associated with injury to cranium .	4
Tinnitus aurium " " cerebral disease .	3
Otalgia neuralgica	19
Deaf mutes	17
Deaf-mutism in seq. cerebro-spinal meningitis .	26
Unfit	41
Unrecorded	16

NOTES BY C. J. BLAKE, M. D.

IN the preceding table the number of cases classified exceeds that of the whole number of patients treated in the aural clinic, for the reason that two distinct diseases sometimes occurred in the same patient.

A comparison with the table of classification of last year shows, with one marked exception, very nearly the same proportion of cases under each heading. This exception is found under the heading, "Otitis interna," associated with cerebral disease, which has been made to include cases of deaf-mutism resulting from cerebro-spinal meningitis, there being but 4 cases recorded in the report of 1872, against 26 cases occurring during the present year. Of this number 37½ per cent were males, of an average age of 6⅓ years, and 62½ per cent females, of an average age of 4½ years. The majority of these patients came from Boston and its vicinity, and were brought to the Infirmary within a few months of the time when the loss of hearing was first noticed. In most of them the external and middle ears were in a comparatively healthy condition, and the loss of hearing total.

Among the more remarkable cases under the various headings may be mentioned the amputation of the right

auricle in a man twenty-six years of age, who was thrown from a train of cars, a wheel cutting away the whole of the upper portion of the auricle close to the head, leaving only the tragus and a small part of the posterior wall of the concha. No diminution of hearing was noticed for some time after the accident, when the hearing began to decrease as the result of an affection of the middle ear, for relief from which he applied for treatment.

Under the heading "Wounds" is included the case of a man kicked by a horse eight days before admission, the blow being sufficient to cut open the cheek and throw him forcibly to the ground, the result being a blow upon the parietal eminence followed by hemorrhage from both ears, the quantity from the right ear being estimated at two ounces.

At time of admission the inferior anterior wall of the meatus was so much swollen as to block the passage; a small opening at the point of greatest swelling allowed the passage of a probe and the detection of loose bone; the force of the blow seemed to have been directed inward and backward, breaking away the anterior wall of the osseous meatus, while the subsequent fall resulted in a rupture of the membrana tympani of both the right and left ears. In 3 other cases of injury from blow or fall upon the occiput, rupture of the membrana tympani occurred in one or both ears, the accident being accompanied by more or less hemorrhage and subsequent serous discharge. In all, the membrana tympani healed with more or less diminution of hearing, and in 2 of the cases the continuance of severe tinnitus aurium and occasional vertigo and titubation gave evidence of more deeply-seated injury. The increase in number of patients is shown, especially in the cases of otitis media purulenta, there being 374 cases against 287 cases in the year ending Oct. 1, 1872. Of this number 64 per cent were males, of an average age of 18½ years, and 36 per cent

females, of an average age of 18 years. Of the males, 25 per cent, and of the females, 30 per cent were under ten years of age. In this connection, with the increase in the whole number of cases of this disease, it is a noticeable fact that the average age at which patients applied for treatment is less, and also that the proportion of cases in which polypi and polypoid granulations occurred as a result of the disease, is very much diminished. In 1872 these complications occurred in about 40 per cent, and in this year in only about 17 per cent of the cases of otitis media purulenta. There have been, however, a larger number of cases this year in which the disease has implicated the mastoid process and in which it has been necessary to make free incisions for the purpose of relieving alarming symptoms. In all of these cases the operation has been successful in cutting short the duration of the disease.

Among other operations may be mentioned the increased number of cases of affection of the middle ear and membrana tympani, in which incision or puncture of the drumhead was practised, together with repeated paracentesis and division of the posterior fold of the membrana tympani in cases of anomalies of tension of that membrane.

The cases of vegetable parasitic growth, under the heading "Aspergillus," have been so classified in consequence of the absence, in all of the cases, of the subjective symptoms of myringomycosis aspergillina, the growth being found either upon impacted cerumen (one case of a. flavescens) or upon old, dried discharge; (two cases of a. nigricans) following an otitis media purulenta. In all the cases a removal of the soil upon which the plant was nourished terminated the disease.

Under the headings "Unfit" and "Unrecorded" are included cases belonging properly to other hospitals, and those having no claim upon the charity of this Institution.

FORM OF A BEQUEST

TO THE

INFIRMARY.

I give and bequeath to the Massachusetts Charitable Eye and Ear Infirmary, of Boston, the sum of dollars, to be applied to the uses of said Infirmary.

FORTY-NINTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY.

1875.

BOSTON:
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1875.

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OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1873-74.

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REPORT OF THE PRESIDENT

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

TO THE MANAGERS.

1874.

Gentlemen: — The record of the Massachusetts Charitable Eye and Ear Infirmary for the past year is gratifying both as to the standing of the institution and as a further proof that the charity is answering a public need.

A proof of this is found in the increase in the number of patients, the majority of those applying for relief in both departments being, as in former years, of the laboring class, very many of them skilled workmen and workwomen pursuing trades for which diminished sight or hearing would render them unfit. The whole number of cases treated in 1872 was 5,975; in 1873, 6,283; and during the past year, 7,099. This steady increase is due to two causes, — the growth of the city, and the extended knowledge of the existence of an institution devoted especially to the treatment of diseases of the eye and ear. With this better knowledge on the part of the public, it is found that a larger number of patients apply for treatment in the earlier stages of disease, thereby securing better average results.

The increase in the charitable work of the Infirmary necessarily implies increased expenditure, to meet which, in addition to the income from the fund and the sum annually

allowed by the State, the institution must look to the contributions of those who seek an investment which shall return as interest the greatest good to the greatest number. It implies also increased labor on the part of the surgeons, a service which is always willingly rendered.

The changes which are in progress in the government and administration of the charity promise well in meeting the increasing demands upon its service, and in the still further enlargement of its usefulness.

The staff of surgeons has, however, lost a valued colleague, and the Infirmary an efficient officer, in the retirement of Dr. Gustavus Hay, at the expiration of a term of service of thirteen years, during which time he has administered to the wants of the patients of the Infirmary with untiring industry and skill.

Mrs. Watson, after fulfilling faithfully the duties of the position of Matron for a period of seventeen years, has also retired during the past year.

Appended herewith are the statistics of both the eye and ear patients of the Infirmary, together with an interesting paper on cataract operations, similar to that presented in previous reports, compiled by Dr. B. Joy Jeffries, and explanatory notes following the statistics of diseases of the ear by Dr. C. J. Blake.

EDWARD H. CLARKE,
President.

STATISTICS OF EIGHTY-THREE OPERATIONS FOR CATARACT,

Performed by the Ophthalmic Surgeons of the Infirmary during the year ending October 1, 1874.

DRS. HAY, DERBY, SHAW, SPRAGUE, JEFFRIES, AND WILLARD.

COMPILED BY B. JOY JEFFRIES, M. D.

THE appended table contains the statistics of the operations for cataract performed by the Ophthalmic Surgical Staff. It will be found that the so-called Græfe's method of extraction was employed in forty-two cases of senile cataract, *i. e.* between the ages of forty-five and eighty-four; its adaptability to other forms is shown by its use in eighteen other cases of cataract. But that the surgeons have not confined themselves to it alone is proved by seven cataracts having been extracted by the linear method and four by the suction method, whilst various methods were employed in the removal of the six traumatic cataracts.*

The resulting vision after Graefe's operation for senile cataract: —

No. Cases.	Vision.
1	$\frac{20}{30}$
4	$\frac{20}{40}$
1	$\frac{10}{20}$
3	$\frac{20}{50}$
1	$\frac{18}{50}$
2	$\frac{20}{70}$
1	$\frac{15}{70}$
5	$\frac{10}{40}$
1	$\frac{10}{50}$
4	$\frac{20}{100}$
1	$\frac{10}{60}$
1	$\frac{10}{70}$
1	$\frac{10}{80}$
1	$\frac{10}{100}$
1	$\frac{8}{100}$
1	$\frac{5}{100}$
1	$\frac{20}{200}$
1	$\frac{15}{200}$
1	$\frac{10}{200}$
32	cases.

*In these operations ether was administered, with a single exception, as will be seen. Chloroform is never used in this institution. The surgeons have not seen ill effects from ether on the operation itself, or bad consequences from its administration for cataract operations. It is given as a matter of course, and is an inestimable advantage to both operator and patient.

Thirty-two cases where vision is recorded. Four cases were total losses, not by the operation, but from ensuing inflammation.

The resulting vision after Græfe's operation for other than senile cataract is as follows: —

No. Cases.	Vision.	No. Cases.	Vision.
1	$\frac{10}{20}$	1	$\frac{10}{200}$
1	$\frac{20}{40}$	2	$\frac{5}{100}$
4	$\frac{20}{50}$	1	0
1	$\frac{10}{50}$	1	not recorded.
2	$\frac{20}{70}$	—	
2	$\frac{20}{100}$	16 cases.	

The resulting vision with linear extraction is as follows: —

No. Cases.	Vision.
1	$\frac{20}{70}$
1	$\frac{20}{100}$
1	$\frac{20}{200}$
1	Counts fingers, goes about.
1	0
—	
5 cases.	

The resulting vision after traumatic cataracts removed is as follows: —

No. Cases.	Vision.
1	$\frac{25}{20}$
1	$\frac{20}{20}$
1	$\frac{20}{40}$
1	No. V. gained.
1	Sees to count fingers, goes about.
1	Sees marking on a finger-ring.
—	
6 cases.	

The resulting vision after suction method.

No. Cases.	Vision.
1	$\frac{20}{50}$
2	$\frac{20}{70}$
1	$\frac{20}{100}$
—	
4 cases.	

In the six cases of congenital cataract operated on, the patients were either too young to be tested or they were not brought back to be tested.

Of the senile cataracts by Græfe's method, four are to be improved by a secondary operation; one was not recorded; and one was tested only for reading, doing this but not tried for distance. It need hardly be added that several of the comparatively imperfect results will be brought hereafter, by secondary operation, among the best.

Whilst these results are satisfactory, it would not be fair to leave unexplained here how our tests for vision are made, and frequently under what disadvantageous circumstances. As a general thing they can be but roughly done. The patients are often very old, frequently unacquainted with letters, sometimes utterly stupid. A hasty trial is made at times while the friends wait to carry the patient away; very rarely, if ever, can the question of astigmatism be determined on, from various causes not dependent on the operator. Hence it is that our resulting visions are not a fair exponent of what the operation has accomplished. The compiler must add one word more here. Whilst he has generally felt that hospital material compared very favorably with that which we have in private practice, he must admit, from the study of the records of all these cases from which the statistics are drawn, that during the past twelve months the ophthalmic surgeons have had to deal with material for cataract operations evidently much below the average of former years, or what generally comes before them. There have been many difficult cases, and feeble people, to interfere with perfect success. Our best cases are the ones which most often leave without our obtaining a fair test and record of the resulting vision. We always know when a

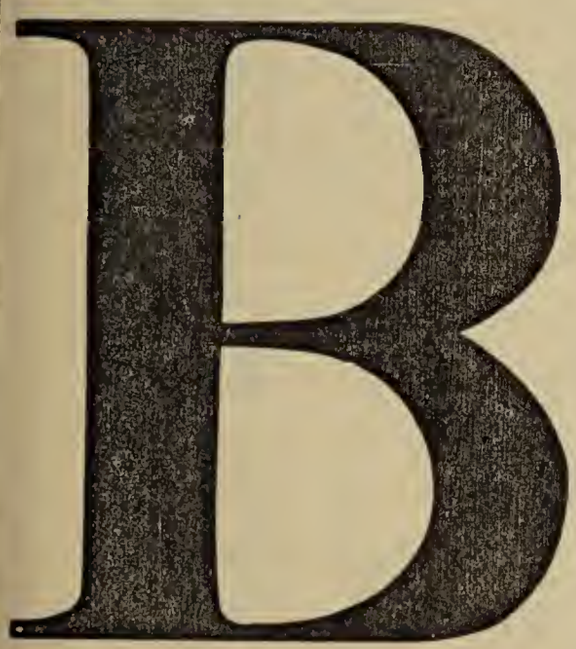
case does not succeed, as such are long enough with us for this to be determined.

In the column of resulting vision the letters Sn. or J. stand for the name Snellen or Jäger, two ophthalmic surgeons who have arranged series of test types gradually increasing in size. The finest type which is introduced on the opposite page corresponds to No. 2 of either series. It will be seen in the vision column that even finer was very frequently read after operation. The vision recorded here is of course always obtained by giving the patient the appropriate glasses whilst testing his visual power.

Another series of type of fixed gradation in size is used to test vision for distance, and this is expressed by a fraction, the numerator of which is the number of feet the patient stands from the card on which the type is printed, and the denominator the special type then read. The letters have a size to correspond with average normal vision. Hence a patient standing at twenty feet and reading type numbered twenty has, we say, vision $= \frac{20}{20}$; or normal if he must approach to within ten feet, then his vision $= \frac{10}{20}$ or one half as good as normal. But it must be added that vision $\frac{1}{10}$ is classed as a success after cataract operation, and very much below that is useful vision. For instance, it requires but little near-sightedness for a person to have only vision $\frac{20}{100}$ or $\frac{20}{200}$ without correction by glasses of course. The types introduced on the opposite page correspond pretty nearly with our several sized letters. Normal vision consists in reading them at the number of feet marked under each.



CC.



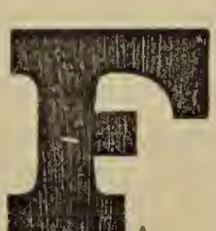
C.



LXX.



L.



XL.



XXX.



XX.

By reference to the column of resulting vision it will be seen that many of the patients who had been blind read type considerably smaller than this after the operation for cataract. This type is equal to about number two of Jager or Snellen.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
1	M.	46	Good.	Soft. O. D. 3 yrs. O. S. 1 yr. Pt. had muscæ but no proof of choroiditis. O. D.	Good.	Oct 1, 1873. Ether. Græfe upwards. Lens substance harder than supposed. Still no nucleus. Ophthalmoscope shows considerble cobweb-like *débris* in the pupil not like ordinary capsule.	14 days.	14 days. V. O. D. = $\frac{5}{100}$.
2	M.	46	Good.	Soft. O. D. 3 yrs. O. S. 1 yr. Pt. had muscæ but no proof of choroiditis. Same patient. O. S.	Good.	Oct. 17, 1873. Ether. Græfe up. Cataract about the same as other eye. Ophthalmoscope shows floating opacities. Patient must have had some choroiditis.	18 days.	18 days. V. O. S. = $\frac{5}{100}$.
3	F.	72	Fair.	Hard ripe. 5 years. O. D.	Good.	Oct. 2, 1873. Ether. Græfe up. Very slight loss of vitreous.	13 days.	5 mos. V. O. D. = $\frac{20}{100}$. Sn. $2\frac{1}{2}$
4	M.	71	Fair.	Hard mature. O. S.	Good.	Oct. 14, 1873. Ether. Græfe up. Patient restless under ether, hemorrhage from conjunctiva and iris considerable. Otherwise operation passed off well. General inflammation came on in 48 hours and proved total loss, but no pain during the whole. The pus formation was excessive. Although no cause of contagion could be thought, it should be mentioned that a case of gonorrhœal ophthalmia was in the next room.	35 days.	V. = $\frac{0}{1}$ O. S.

5	M.	59	Fair.	Hard. 18 mos. O. D.		Oct. 15, 1873. Ether. Græfe up. Large nucleus. After 5 days' slight prolapse of iris at outer end of wound. Compressive bandage reduced it.	40 days.	40 days. V. O. D. = $\frac{10}{60}$.
6	M.	63	Good.	Hard mature. 1 year. O. D.	Good.	Oct. 18, 1873. Ether. Græfe up. Normal.	12 days.	12 days. V. O. D. = $\frac{20}{70}$.
7	M.	60	Good.	Senile year and half and post-polar. O. D.	Good.	Oct. 21, 1873. Ether. Græfe up. Normal. This eye had been seen a year before, and the prognosis given as not very favorable for operation.	17 days.	17 days. V. O. D. = $\frac{20}{50}$. Sn. $1\frac{1}{2}$.
8	M.	61	Good.	Senile, and post-polar, same patient. O. S.	Good.	Sept. 18, 1874. Ether. Græfe up. The same conditions had been seen in this eye.	14 days.	14 days. V. O. S. = $\frac{20}{50}$. Sn. $1\frac{1}{2}$.
9	M.	84	Good.	Senile. 5 years. O. D.	Good.	Nov. 5, 1873. Ether. Græfe up. Lens large and hard. Patient very restless about his bandage.	26 days.	5 months. V. O. D. = $\frac{20}{40}$. Sn. $1\frac{1}{2}$.
10	M.	74	Good.	Hard. Some opacity of capsule. 10 years. O. D.	Good.	Nov. 6, 1873. Ether. Græfe up. Lens hard and shrunken, had to be removed with scoop to avoid dislocation. Iritis fourth day and membrane formed in pupil. To return for capsule operation.	21 days.	V. O. D. = $\frac{8}{100}$.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
11	M.	80	Good.	Hard. 18 months. O. D.	Good.	Nov. 7, 1873. Without ether. Græfe up. Some vitreous. Hemorrhage troublesome. Subsequent attacks of traumatic iritis and membrane in pupil to be cleared by secondary operation.	39 days.	39 days. Can count fingers at 2′ and find his way alone with O. D.
12	M.	59	Poor.	Hard ripe. 3 years. O.S.	Good.	Nov. 29, 1873. Ether. Græfe up.	12 days.	12 days. V. O. S. = $\frac{20}{40}$. Sn. $1\frac{1}{2}$.
13	F.	58	Not good.	17 years, blind 10 years. O. S.	Good.	Dec. 3, 1873. Ether. Græfe up. Patient had an attack of asthma and otherwise sick. Slight iritis.	21 days.	21 days. V. O. S. = $\frac{10}{20}$.
14	F.	70	Fair.	Hard. Began 1 year ago. O. D.	Good.	Dec. 3. 1873. Ether. Græfe up. Nucleus hard.	21 days.	21 days. V. O. D. = $\frac{10}{40}$. Sn. $4\frac{1}{2}$.
15	M.	70	Good.	Hard. 18 months. O. S.	Good.	Dec. 3, '73. Ether. Græfe up. Lens very hard and dark.	21 days.	21 days. V. O. S. = $\frac{10}{40}$.
16	M.	45	Good.	About 1 year. Possibly soft. O. S.	Good.	Dec. 10, '73. Ether. Græfe up. Subsequent iritis caused a blocked pupil, cleared by secondary operation after six weeks with hook.	49 days.	49 days. V. O. S. = $\frac{10}{20}$. Sn. $4\frac{1}{2}$.

17	M.	60	Good.	Senile. 15yrs. Blind 2 yrs. O. D.	Fair.	Dec. 12, '73. Ether. Græfe up. Bad subject.	14 days.	14 days. V. O. D. = $\frac{10}{40}$.
18	F.	45	Good.	Senile. 3 yrs. Chalky look. O. D.	Fair.	Jan. 13, '74. Ether. Græfe up. Cornea small. Eye deep set, difficult to get at.	13 days.	35 days. V. O. D. = $\frac{10}{80}$.
19	M.	24	Good.	Nucleo-cortical. 4 yrs. O. D.	Good.	Jan. 14, '74. Ether. Græfe up. Small. Other eye done previous July; it was a shrunken, flat, opaque cataract.	17 days.	17 days. V. O. D. = $\frac{20}{40}$.
20	M.	36	Good.	Congenital with extension to nucleus 4 yrs. ago. O. D.	Good.	Jan. 17, '74. Ether. Græfe up, except no iridectomy as both irides were deficient upwards. Some floating opacities seen in vitreous with the mirror. Other eye has post cap. cat. and point of ant. cap. cat.	40 days.	4 mos. V. O. S. = $\frac{10}{50}$.
21	M.	47	Good.	Semi-solid. O. S.	Fair.	Jan. 27, '74. Ether. Græfe up. Vitreous presented and the dislocated lens in its capsule was removed by Schuft's spoon. Capsule very firm so as to bear the pressure of the fingers. Low form of iritis on 6th day subsided before discharge. Pt. to return.	17 days.	33 days. Counts fingers at 15 ft. with O. S.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
22	M.	68	Fair.	Senile hard. 2 years. O. S.	Good.	Feb. 10, '74. Ether. Græfe up. 4th day mild iritis, gone in 6 days, but pupil obstructed, and July 31st ether, and opaque capsule removed. O. D. was done by Græfe's op. June 7, '73, and has v. = $\frac{20}{20}$.	22 days.	6 mos. v. O. S. = $\frac{20}{70}$. Sn. 2.
23	F.	30	Good.	Not hard. 12 months. O. D.	Good.	Feb. 13, 1874. Ether. Græfe up. Small cut. 2d day ant. chamber filled with turbid fluid. Menses appeared suddenly out of season. Eye went on to choroiditis and panophthalmitis. Health had been very poor but improving. Catarrh of both lac. scs. much improved some weeks before cat. op. was done.	17 days.	17 days. v. O. S. = $\frac{0}{1}$.
24	M.	39	Good.	Hard with calcareous capsule ant. some years. O. D.	Good.	Feb. 13, '74. Ether. Græfe up. Calcareous ant. capsule removed with forceps.	14 days.	18 days. v. O. D. = $\frac{12}{15}$.
25	M.	56	Good.	Unripe. 4 yrs. O. D.	Good.	Mar. 7, '74. Ether Græfe up. Iritis followed closing pupil with membrane. Sept. 26, '74, new pupil made with Wecker's scissors. Much fluid vitreous escaped.	31 days.	9 mos. v. O. D. = $\frac{20}{30}$. Sn. $1\frac{1}{2}$.

26	M.	69	Fair.	Senile not perfect. O. D.	Good.	Mar. 10, '74. Ether. Græfe up. Lens sticky. A large mass of cortical left which gradually absorbed; not all gone in 7 months when v. was taken.	30 days.	7 mos. v. O. D. = $\frac{18}{50}$. Sn. $1\frac{1}{2}$.
27	F.	62	Fair.	Ripe. 5 yrs. O. D.	Good.	Mar. 14, '74. Ether. Græfe up. Some capsule left in the pupil. Next day much swelling of lids and followed by much discharge and total suppuration of cornea. Acute mania, and pt. removed from house against all remonstrance.	3 days.	v. O. D. = $\frac{0}{1}$.
28	F.	16	Good.	Congenital central and extending O. D. 4 needle operations 5 years previous.	Good.	Mar. 13, '74. Ether. Græfe small up, and repeated pulls necessary on old capsule and *débris* of cataract. Pt. had been 6 years in Blind Asylum.	14 days.	6 mos. v. O. D. = $\frac{20}{50}$. Sn. $1\frac{1}{2}$.
29	F.	16	Good.	Congenital central and extending O. D. 4 needle operations 6 years previous. Same pt. O. S.	Good.	Mar. 31, '74. Ether. Græfe small up, and repeated pulls necessary on old capsule and *débris* of cataract. Pt. had been these 6 years in Blind Asylum.	7 days.	6 mos. v. O. S. = $\frac{20}{30}$. Jäger 1.
30	F.	25	Fair.	Central congenital. O. S. Extended.	Good.	Nov. 11, 1873. Ether. Græfe cut up. Small. Considerable cortical left as patient is young enough to absorb it.	16 days.	10 months. v. O. S. = $\frac{20}{100}$. Jäger, 6.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Educational Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
31	F.	25	Fair.	Central congenital. Same patient. O. D. Extended.	Good.	Mar. 20, 1874. Ether. Græfe cut up. Small. Considerable cortical left as patient is young enough to absorb it. Pupil well cleared with forceps.	14 days.	6 months. V. O. D. = $\frac{20}{100}$. Jäger, 6.
32	M.	37	Fair.	Two years. O. D.	Good.	March 18, '74. Ether. Græfe up. Iris tremulous. Tedious convalescence from irritable eye.	42 days.	7 mos. V. O. D. = $\frac{10}{20}$.
33	M.	14	Good.	Traumatic. Some 2 years. O. D.	Good.	March 23, '74. Ether. Græfe up. Small. Cataract found soft. Easily removed.	42 days.	14 days. V. O. D. = $\frac{20}{50}$. Sn. $1\frac{1}{2}$.
34	M.	25	Good.	Traumatic. 2–3 years. O. D.	Good.	March 24, '74. Ether. Græfe up. Small cut. Viteous fluid and flowed at once. Through this the sticky lens was removed, and capsule with forceps. 4th day eye quite perfect. 5th night pt. struck his eye in his sleep, and awoke in great pain. Blood in antechamber; great swelling of conjunc. and lids. This all gradually subsided.	19 days.	51 days. V. O. D. = $\frac{20}{70}$.
35	M.	52	Good.	Senile hard. $4\frac{1}{2}$ years. O. D.	Good.	April 8, '74. Ether. Græfe up. Sept. 30, '74, Agnew's operation on fine pupillary membrane.	17 days.	43 days. V. O. D. = $\frac{20}{50}$.

36	M.	81	Good.	Senile hard. 6 years. O. S.	Good.	April 7, '74. Ether. Græfe up. Cornea very small and wound enlarged. Lens came with difficulty. A pretty considerable mass of cortical was left, and slowly absorbed. Vision will be good when this is gone.	23 days.	30 days. V. O. S. Counts fingers at 3′ and goes about alone.
37	M.	70	Fair.	Hard mature. 2 years. O. D.	Good.	April 18, '74. Ether. Græfe up. Much bleeding into ant. chamb. Lens dislocated and removed with scoop. Some vitreous. Slight iritis followed and pupil filled, but clearing when discharged.	21 days.	2 days. V. O. D. = $\frac{10}{200}$. Sn. 2.
38	F.	58	Fair.	Hard overripe. 6 years. O. D.	Good.	April 17, '74. Ether. Græfe up. Normal. Pt. had considerable exhausting diarrhœa, but did well.	14 days.	14 days. V. O. D. = $\frac{20}{50}$. Sn. 2.
39	F.	30	Good.	Soft. Ripe. O. D.	Good.	April 29, '74. Ether. Græfe up. Lens soft. Clear pupil left. Old choroidal history for 10 years, and operation solely for cosmetic purposes. Much cortical in pupil at time of discharge.	15 days.	15 days. V. O. D. = $\frac{10}{200}$.
40	M.	64	Good.	Hard mature. 6 months. O. S.	Good.	May 2, '74. Ether. Græfe up. Normal. Much cortical in pupil at time of discharge.	14 days.	14 days. V. O. S. = $\frac{15}{200}$.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
41	M.	72	Fair.	Hard mature. 4 years. O. S.	Good.	May 2, '74. Ether. Græfe up. Great collapse of cornea. Pupil had dilated but very little to atropine. Suppuration commenced 24 hours after.	7 days.	7 days. V. O. S. = $\frac{0}{1}$.
42	F.	74	Fair.	Senile hard. O. S. Both.	Good.	May 1, '74. Ether. Græfe up. Normal, except cut rather small, yet lens and cortical came easy. Pt. irritable and homesick. Taken home before resulting vision could be taken.	18 days.	18 days. V. O. S. Jäger, 8.
43	M.	52	Good.	Six months. O. D.	Good.	May 22, '74. Ether. Græfe up. A slow and insidious traumatic iritis followed, but finally subsided, and in 12 days pt. treated as out-patient and so escaped record.	12 days.	Not taken. O. D.
44	F.	70	Good.	Hard. 2 mos. O. D.	Good.	May 29, '74. Ether. Græfe up. Much opaque capsule left behind, which on being incised allowed a drop or two of fluid vitreous to escape. Much membrane left in pupil at time of discharge. To return for secondary operation.	15 days.	60 days. V. O. D. = $\frac{10}{40}$.

45	M.	79	Good.	3 to 4 years. O. S.	Good.	May 28, '74. Ether. Græfe up. Vitreous, very fluid, and some escaped. 18 days pt. has had some sub-acute iritis which quieted down. Oct. 3, needle operation on pupillary membrane with improved V. but not recorded.	21 days.	21 days. V. O. S. = $\frac{5}{100}$.
46	F.	60	Good.	Senile 2 years. Blind 6 mos. O. D.	Good.	June 4, '74. Ether. Græfe up. Normal. Had some slight iritis subdued by atropine and leeches.	28 days.	28 days. V. O. D. = $\frac{10}{100}$.
47	M.	53	Good.	Senile. O. D.	Good.	June 11, 1874. Ether. Græfe up. Some iritic irritation from cortical left and coming into ant. chamb.	21 days.	21 days. V. O. D. = $\frac{20}{100}$.
48	M.	77	Feeble.	Senile 2 years. Blind 1 year. O. D.	Good.	June 13, 1874. Ether. Græfe up. Patient rather feeble and kept very quiet during convalescence.	17 days.	17 days. V. O. D. = $\frac{20}{100}$.
49	F.	70	Fair.	Hard senile. O. D.	Poor, old granulations.	June 17, 1874. Ether. Græfe up. Wound healed slowly. Patient stupid, and interfered with bandage, producing iritis and hemorrhage into ant. chamb. 4th day, followed by keratitis. Discharged at request. 13th day, iritis gone but conjunctiva and cornea still affected.	13 days.	13 days. Counts fingers at 2′.
50	M.	71	Good.	Traumatic 14 years. O. D. Wound of cornea ant. synechia.	Good.	June 20, 1874. Ether. Græfe up. Lens became dislocated and removed with Schift's spoon entire in its capsule. Did well in spite of patient's restlessness.	18 days.	40 days. V. O. D. = $\frac{20}{70}$.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthsia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
51	M.	76	Feeble.	Hard senile. 2 years. O. D.	Fair.	June 20, 1874. Ether. Græfe up. Patient shook from cough under ether. 22d, prolapsed iris excised without ether. Iritis in two days. Pupil closed. To return for secondary operation.	30 days.	30 days. Perception good. O. D.
52	M.	71	Fair	Senile over-ripe, eye squints, post-polar other eye. O. S.	Good.	June 26, 1874. Ether. Græfe up. Lens removed with scoop entire in capsule. No vitreous. Vision imperfect, floating opacities.	32 days.	32 days. V. O. S. Imperfect.
53	M.	48	Fair.	Senile, O. D. 5 years. O. S. Immature.	Fair.	July 25, 1874. Ether. Græfe up. Iritic irritation from absorbing cortical although much removed by operation.	28 days.	30 days. V. O. D. $= \frac{10}{50}$.
54	M.	66	Good.	Senile, O. D.	Good.	Aug. 8, 1874. Ether. Græfe up.	14 days.	14 days. V. O. D. $= \frac{20}{40}$.
55	F.	72	Good.	Senile. Blind 5 years. O. S.	Good.	Aug. 15, 1874. Ether. Græfe up. Some iritic irritation.	20 days.	20 days. V. O. S. $= \frac{15}{70}$.
56	F.	70	Fair.	Senile. O. S.	Good.	August 18, 1874. Ether. Græfe up. Normal. Pt. behaved badly after operation, probably from senile delirium.	13 days.	13 days. V. O. S. $= \frac{20}{40}$.

57	M.	50	Good.	Congenital. O. S. Lately increasing.	Good.	Sept. 8, 1874. Ether. Græfe, small cut up. A broken-up, sticky lens removed with forceps and curette.	18 days.	25 days. V. O. S. = $\frac{20}{50}$.
58	F.	62	Fair.	Senile. Above 2 years. O. D.	Good.	Sept. 12, 1874. Ether. Græfe up. There was some hemorrhage in ant. chamber, clearing at time of discharge.	14 days.	16 days. V. O. D. = $\frac{10}{70}$.
59	F.	64	Poor.	Senile. 2 years. O. D.	Good.	Sept. 26, 1874. Ether. Græfe up. Normal. Much membrane in pupil for secondary operation.	11 days.	24 days. V. O. D. = $\frac{20}{200}$.
60	F.	73		Hard. 4 years. O. D.	Good.	Sept. 30, 1874. Ether. Græfe up. Wound small. Lens very large, and removed with difficulty. Clear pupil. Suppurative inflammation supervened with a full attack of panophthalmitis.	14 days.	14 days. V. O. D. = $\frac{0}{1}$.

LINEAR EXTRACTIONS OF CATARACT.

61	M.	28		Traumatic. 3 days. O. S.		Nov. 3, 1873. Ether. Linear incision made with lance-knife up and out, and soft lens matter pressed out. Opaque capsule then divided with sharp hook. Much pain and inflammation came on suddenly (capsulitis) a few days after operation.	17 days.	17 days V. O. S. = $\frac{20}{70}$

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia. Course of Healing Process and Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
62	M	36	Good.	Traumatic. O. S. 5 days. Swollen mass of lens substance in ant. chamb.	Fair.	June 3, 1874. Ether. Suction was attempted, but owing to imperfection of instrument failed. Then a very small cut made upwards with a bent lance-knife. Fair iridectomy made and masses of opaque lens substance extracted leaving a fairly clear pupil. Eye healed somewhat slowly. Wound of injury bulged, but gradually subsided.	13 days.	70 days. V. O. S. = $\frac{20}{200}$.
63	M.	26	Fair.	Traumatic. O. S.	Fair.	July 19, 1874. Ether. Portion of lens removed by suction (instrument imperfect), cut then enlarged and iridectomy upwards, leaving pupil nearly clear. Eye healed well, but nucleus has become opaque. To return for secondary operation.	9 days.	9 days. V. O. S. Counts fingers.
64	M.	33		From iridochoroiditis. O. D.		Jan. 30, 1874. Ether. Linear upwards. Inflammation followed, with atrophy of globe, which was subsequently removed for sympathetic irritation of O. S.	$4\frac{1}{2}$ mos.	
65	M.	26		Traumatic. O. S. By fragment stone some weeks.		April 22, 1874. Ether. Lance-knife linear below. No iridectomy. Large mass soft lens substance evacuated.	17 days.	31 days. V. O. S. = $\frac{20}{100}$.

Removal of Cataract by Suction Method.

66	M.	41	Fair.	Soft 4 months, probably traumatic. O. D.	Good.	Aug. 28, 1874. Ether. Suction cleared the pupil perfectly. Eye healed well. Pupil left almost circular.	8 days.	8 days. V. O. D. = $\frac{20}{70}$. Sn. $1\frac{1}{2}$.
67	M.	25	Good.	Traumatic duration unknown. O. S.	Fair.	July 6, '74. Ether. Suction done, fairly successful, but instrument was imperfect. Iritis 9th day for 3-4 days. Capsule mass in pupil.	22 days.	22 days. V. O. S. = $\frac{20}{70}$. Sn. $1\frac{1}{2}$.
68	M.	21	Good.	O. D. Traumatic. Lens substance in ant. chamb.	Photophobid not extreme.	July 20, 1874. Ether. Suction removed entire lens substance with considerable opaque capsule. Did well. Cataract the result of bursting of a pistol. Cornea crushed.	9 days.	9 days. V. O. D. = $\frac{20}{100}$. Sn. $1\frac{1}{2}$.
69	M.	30	Good	O. D. Traumatic soft.		Aug. 8, 1874. Ether. Suction successfully removed entire soft cataract. Eye did well.	8 days.	8 days. V. O. D. = $\frac{20}{50}$. Sn. 6.

Removal of Soft Cataract.

70	F.	14	Good.	Soft O. S. Dates 5 years back.	Good.	Mar. 21, 1874. Ether. Linear cut made with lance-knife. Capsule opened and lens flowed easily. Some capsule left. Did well. Pupil clearing when patient left.	9 days.	Did not return to be tested.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Functional Examination.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Vision.
				CONGENITAL CATARACTS REMOVED.				
71 72	M.	6 mos.		Soft congenital. O. D. O. S.		Nov. 3, '73. Ether. Incision made at edge of each cornea, and soft lens matter removed by pressure. Capsule in each pupil. A little vitreous in left from attempting to remove it. April 24, 1874. Agnew done in O. D. April 26, 1874. Ditto in left, some blood in the ant. chamb.	2 days.	Patient too young to decide v. Much improved.
73	F.	5	Fair.	Congenital. O. D.		Nov. 5, 1873. Ether. Needle attempted, but eye had been operated on before and tough membrane in pupil, this broken by hook.	3 days.	v. not taken.
74 75	M.	6	Good.	Congenital increasing. O. D. O. S.		July 16, 1874. Ether. Ant. capsule punctured both eyes, and lens substance broken up freely. 2 days suppurative iritis O. S. Parcentesis removed pus, cortical, and aqueous. 2 days, operation again.	14 days.	v. not got. Patient too young.
76 77	M.	9	Good.	Congenital. O. D. and O. S. Increasing. Complete bluish opacity, both lenses. O. S.	Good.	July 15, 1873. No ether. O. D. discission. Most of fluid lens escaped with aqueous. O. S. linear extraction with broad needle; little vitreous lost. 13 days later counts fingers at 3 feet with convex five glass.	14 days.	v. much improved.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Vision.
					TRAUMATIC CATARACTS OPERATED ON.		
78	M.	18	Good.	Traumatic. Broad post. syn. O. S.	Oct. 31, '73. Ether. Lance-knife entered down and out, and iridectomy made, including the post. syn. Through this with forceps and curette the lens pretty well evacuated. Pt. taken sick and sent to Gen. Hos. Eye did well.	11 days.	48 days. V. O. S. = $\frac{20}{40}$.
79	M.	14	Good.	Traumatic. Percussion cap. O. S.	Oct. 31, 1873. Ether. Operation required on account pn. From fear no history till afterwards. Lens substance and capsule in corneal wound. Lance-knife entered down and out, and no iris removed. Lens substance and broken capsule removed with forceps. Pt. did well till 14th day when pn. and pus in ant. chamb. This subsided and pt. counted fingers when discharged.	34 days.	Counts fingers.
80	M.	28		Traumatic. 6 days. O. D.	Nov. 18, 1873. Ether. Linear incision upwards with lance-knife. Some soft lens matter pressed out. Vitreous then followed and operation had to be stopped, an attempt having been previously made to lacerate capsule with a sharp hook. Much pn., redness and chemosis same evening relieved by leeches. The inflammation gradually subsided, but no vision when discharged.	21 days.	21 days. V. = O.

No.	Sex.	Age.	General Health.	Quality and Duration of the Cataract.	Date and Method of Operating. Anæsthesia Course of Healing Process and Treatment. Secondary Operations. Remarks.	Duration of Treatment.	Resulting Vision and Date of Record.
81	M.	42	Good.	Traumatic. 7 weeks. O. S. Great pn. and iritis from bruise of cornea ant. and post. syn.	Nov. 25, 1873. Ether. Iridectomy downwards and outwards, and lens substance evacuated, but considerable cortical left. Pt. did well, and v. improving when discharged.	10 days.	10 days. v. o. s. Sees setting and marking of a finger ring.
82	M.	23	Good.	Traumatic. For. bod. in lens.	Jan. 22, 1874. Ether. Attempt made to remove for. bod. through broad needle opening. Wound enlarged. Lens came forward and held for body. It was made to float out with the aqueous. Lens substance then removed, leaving black pupil. Iris not touched.	11 days.	11 days. v. o. = $\frac{25}{20}$. Sn. $1\frac{1}{2}$.
83	M.	18	Good.	Traumatic. 6 months soft. O. S.	Feb. 26, 1874. Ether. Small cut made with needle, and capsule opened at same time. Lens sucked out and capsule with forceps. Iris followed, but replaced. Some inter irritation for a few days.	15 days.	30 days. v. o. s. = $\frac{20}{20}$.

STATISTICAL REPORT OF 1911 CASES OF DISEASES OF THE EAR.

Treated at the Massachusetts Charitable Eye and Ear Infirmary during the year 1874.

CLASSIFICATION.

Tumor of lobe	1
Abscess of auricle and meatus	10
Eczema " " "	38
Wounds " " "	1
Otalgia " " "	7
Obstruction of meatus from cerumen	331
Foreign bodies in meatus	19
Otitis externa circumscripta	48
Otitis externa diffusa	31
Aspergillus	4
Myringitis	41
Rupture of membrana tympana	4
Destruction of " "	2
Perforation of " "	38
Polypoid granulations on membrana tympani	25
Otitis media purulenta	497
" " " with abscess of mastoid process	7
" " " with polypi	38
" " catarrhalis chronica	539
" " " acuta	63
" " " sub-acuta	43
" " " serosa	5
" interna s. labyrinthica	17
" interna associated with injury to cranium	1
Tinnitus aurium associated with cerebral disease	5

Otalgia neuralgica	26
Deaf mutes	2
Deaf-mutism in seq. cerebro-spinal meningitis	9
Unfit	47
Unrecorded	10
Scalds and burns	2

NOTES BY C. J. BLAKE, M. D.

As in preceding years, the number of cases classified exceeds that of the whole number of patients treated in the aural clinic, two distinct diseases sometimes occurring in the same patient and being recorded accordingly. A comparison with the tables of classification of preceding years shows firstly a marked increase in the number of patients, the number of cases recorded in 1872 being 1,685, and in 1873, 1,729. The greater proportionate increase for 1874 is possibly in a measure due to other causes than those immediately affecting the health, as it has been noticeable that the number of patients of the better class who, under other circumstances, would have been private patients has somewhat increased during the past year.

The tumor of the lobe occurred in a woman seventy years of age, being the simple fibrous tumor as usually seen and presenting no peculiarity worthy of special mention.

Of the cases of eczema of the auricle and meatus, ten were males, the average age being eleven years, and six of the ten being under ten years of age; twenty-eight were females, the average age being twenty-four years, and ten of the twenty-eight being under ten years of age.

In the cases of children the eczema usually accompanied an otitis media purulenta, and affected the auricle as well as the meatus. The children were principally of the poorer class, poorly cared for and ill nourished, and required gen-

eral as well as local treatment, the former consisting principally in the administration of iron in some form and cod-liver oil, and the latter in the application of olive-oil, for the purpose of softening the eczematous crusts, followed by washing with warm soap water and the application of benzoated oxyde of zinc ointment. The cases of simple eczema of the meatus occurred principally in females, and either accompanied impacted cerumen and epidermis or were the result of the injudicious use of pins and other irritating bodies. In these cases the itching usually subsided under an application of the sulpho-carbolate of zinc, 10-20 grains to half an ounce each of glycerine and water, with the addition of from one to five drops of carbolic acid frequently repeated.

Of the cases of impacted cerumen, sixty-four per cent were males of an average age of thirty-nine years, and thirty-six per cent females of an average age of thirty-eight years.

Among the more obstinate cases of impaction may be mentioned those occurring in old people in whom the accumulation was of long standing, the cerumen having become very dense and firm, and being intermixed with flakes of epidermis or surrounded by thickened epidermis, which was in some cases removed by means of the forceps and found to present a complete cast of the auditory canal and outer surface of the membrana tympani. Simple syringing was often inadequate to the removal of these masses, and it was necessary to resort to other means. In two cases especially, considerable difficulty was experienced. In one, that of a woman fifty years of age, the ceruminous portion of the mass was dissolved by continued use of warm water and the epidermis which remained extracted piecemeal at various times by means of the forceps.

The second case was that of a man forty years of age who had frequently suffered from diffuse inflammation of the

meatus, and had been deaf in the left ear from boyhood. The auditory canal was filled with a firm mass of cerumen and epidermis which resisted all ordinary attempts at its removal. It finally became necessary to bore into the centre of the mass and apply caustic potash, which so far disintegrated it as to allow of its removal by syringing. The membrana tympani was found to be considerably thickened, but the hearing, which improved immediately upon removal of the mass of epidermis, continued to gain as the irritation consequent upon the operation subsided until the watch was plainly heard at a distance of $\frac{4}{72}$.

Of the cases of foreign bodies in the external auditory canal, thirteen occurred in males and six in females, the average age being sixteen years.

Of the males, seven, and of the females, three were children, the foreign bodies being, in three cases, beans, and in one case each a button, a cherry-stone, an apple-seed, a fly, an orange-seed, an oat-grain, and a kernel of corn. In three of the cases attempt at forcible extraction had been made before admission to the Infirmary, resulting in more or less injury to the lining of the canal and to the membrana tympani, the membrane having been ruptured in one case. In each case the foreign body was removed by the careful use of the syringe and warm water. The foreign bodies removed in the cases of adults were, with two exceptions, insects; these also were easily removed by syringing. In one case of otitis media purulenta, living larvæ were found in the middle ear, and after removal by means of the forceps and warm syringing, were found to be well-developed larvæ of *m. sarcophaga*. The character of the foreign bodies found in the ears of children corresponds, as would be expected, to the habit which some children have of putting small bodies, notably beans and the like, into the ear. The adult patients from whose ears insects were removed were principally of the lowest class. Of the

cases of otitis externa circumscripta, eighteen were males of an average age of twenty-four years, and thirty females of an average age of twenty-five and one half years. The location of the furuncles in the majority of the cases was in the outer third of the canal. The treatment consisting in free incision with the Gruber knife or a narrow-bladed bistoury, followed by warm syringing and application of small poultices made of boiled fig, frequently repeated.

In the cases of otitis externa diffusa, of which fifteen were males of an average age of twenty-six years and sixteen females of an average age of twenty-nine years, free incision was also resorted to when the congestion, swelling, and pain were considerable, greater and more immediate relief being afforded by this than by other means of treatment. When the pain and congestion had in a measure subsided or were passing away, leaving considerable swelling, incision was not employed, as experience showed that the edges of the cuts were liable to become the seats of troublesome granulations. At this stage the fig-poultices were used and a cotton-wool tampon inserted with the result of diminishing the swelling in a short time; if the tampons caused pain they were discontinued and the poultices re-applied.

Of the cases of myringitis, thirty-one were males of an average age of twenty-six and one half years, six of the cases occurring in children; ten were females of an average age of seventeen and one half years, six of the cases occurring in children. The males affected were principally young men, the disease occurring in the majority during the winter months, and among workmen confined by their occupation to warm rooms; this observation confirming that made during a previous year, it appearing that cases of myringitis occurred among children, especially boys, during the warm season, being referable in the majority of the cases to cold sea bathing; among young women during the inclement

autumn and spring months, and among young men during the colder weather of winter.

When the patients applied for treatment during the earlier stage of the disease, free scarification of the membrana tympani was resorted to with marked benefit; leeches were also applied in front of the tragus. In the later stage, where there was accumulation of secretion within the tympanum in place of scarification, the membrana tympani was freely incised. The ultimate diminution of hearing was much less in the cases so treated than in those applying for treatment later in the course of the disease.

The cases of serous accumulation within the tympanum, of which two occurred in males and three in females, were very slight, and generally relieved by the repeated use of the air douche, the head of the patient being inclined towards the shoulder in order to bring the Eustachian tube of the affected side into a vertical position, as recommended by Prof. Politzer.

The cases of aspergillus, of which two were males and one a female, presented no peculiarity worthy of special mention. The growth was upon cerumen and epidermis or dried secretion from the middle ear, and was not of sufficient extent to excite the symptoms characteristic of a myringomykosis aspergillina.

Of the cases of otitis media acuta, thirty-eight were males of an average age of twenty-seven and one half years, and twenty-five females of an average age of thirty-two and one half years.

These cases increased in number, especially during the winter months on the occurrence of severe cold, and during the variable weather of spring.

The disease was more common in young men whose occupations obliged them to be exposed in all weathers, and in young women of a corresponding class and in school girls.

Of the cases of otitis media purulenta, two hundred and eighty-three were males of an average age of twenty years, and two hundred and fourteen females of an average age of sixteen and one half years.

Of the males, the left ear was affected in ninety-four cases, the right ear in one hundred and four cases, and both ears in eighty-five cases.

Of the females, the left ear was affected in sixty-six cases, the right ear in sixty-seven cases, and both ears in eighty-one cases.

The disease of the ear was definitely traceable as the result of scarlet fever in sixteen males, or about five and two thirds per cent, and in fifteen females, or about seven per cent. This percentage certainly seems to be a very small one, but in many of the cases the patients or their parents could give no definite information as to the ætiology of the disease. The number of cases in which one ear alone was affected, presents a marked contrast to the number of cases in which both ears were diseased. Where disease of the mastoid cells occurred as a complication of the purulent inflammation of the middle ear, the patients were usually taken into the house for treatment, as demanding especial care and being more readily kept under observation and control. In none of these cases occurring during the past year has it been necessary to resort to the use of the trephine. Where the symptoms did not subside under treatment directed to secure a free discharge from the middle ear, such as free incision of the membrana tympani and cleanliness, and poultices applied over the mastoid region, a simple incision of from half an inch to an inch in length over the mastoid process, from above downward, has been followed, with appropriate after treatment, by a subsidence of the alarming symptoms, and ultimate recovery of the patient.

Chronic catarrhal inflammation of the middle ear furnishes about twenty-seven per cent of all the cases treated during

the past year. During the two previous years the percentage of these cases has been somewhat greater. The apparent diminution of the present year is due, probably, not so much to the lesser number of cases of this disease treated as to the fact that with each year, with a more extended knowledge of the existence of an institution devoted to the treatment of diseases of especial organs, a larger number of patients apply for treatment during the acute stages of disease. The total number is also increased by the application of patients having minor troubles which might otherwise be allowed to go uncared for.

In two hundred and ninety-one males, the average age was thirty-four and one third years, and in two hundred and forty-eight females, the average age was thirty-two and one half years. Of these numbers, in males, the right ear was affected in forty-three cases, the left ear in twenty cases, and both ears in two hundred and twenty-eight cases.

In females, the right ear was affected in twenty-six cases, the left ear in twenty cases, and both ears in two hundred and two cases.

In addition to the treatment usually applicable to such cases, division of the posterior fold of the membrana tympani was employed in several cases, and also repeated incision of the membrana tympani, with some relief from annoying tinnitus aurium. When this latter symptom was especially troublesome at night, the bromide of potassium was administered in doses of from ten to twenty grains at bed-time, and continued during treatment.

In obtaining the history of the cases, an attempt was made to ascertain what, if any, influence habitual position had in increasing the affection of one or the other ear. In the cases so observed it was found that the ear affected, if but one, or the worse ear, if both were affected, was usually the ear on that side upon which the patient was in the habit

of sleeping. The natural gravitation of the fluid secreted from the mucous membrane of the naso-pharyngeal space towards the recumbent side, and the effect which this would have towards closing the pharyngeal opening of the Eustachian tube, the retention of secretion within the Eustachian tube and middle ear, and the further tendency towards closure of that passage from the position would serve in a measure to account for this peculiarity.

The number of cases of disease of the internal ear is much less than that of the preceding year, — the large number of cases in 1873, corresponding to an epidemic of cerebro-spinal meningitis occurring in this vicinity.

Ten of the cases were males of an average age of eleven years, eight of the cases occurring in children. Seven were females of an average age of nine years, six of the cases occurring in children.

In nine additional cases occurring in children, where the loss of hearing was total, the deafness was positively traceable to cerebro-spinal meningitis.

The cases recorded as unfit were those of persons applying for treatment who were subjects for treatment in other charitable institutions, or those who from their circumstances were not properly objects of charity.

The unrecorded cases are those where no diagnosis was made, or where the patient was referred to some other institution without examination.

NOTE. The cases above given were treated in alternate terms of three months each by Dr. C. J. Blake and Dr. Henry L. Shaw.

STATISTICS.

OCTOBER 1, 1873, TO OCTOBER 1, 1874.

CLASSIFICATION OF PATIENTS, DISEASES, AND OPERATIONS.

Out-Patients.

Whole No. eye patients		4,810
" ear "		1,842
Total eye and ear patients		6,652
Males	3,555	
Females	3,097	
Residents of Boston		3,437
" other parts of Massachusetts		2,931
" Maine		108
" New Hampshire		72
" Vermont		27
" Rhode Island		17
" Connecticut		5
" other States		9
" British Provinces		20
" Foreign countries		5
Unrecorded		21
		6,652

House Patients.

Males	250
Females	146
	396

Out-Patients (continued).

Eye patients —		
Males	2,578	
Females	2,232	
		4,810
Ear patients —		
Males	967	
Females	875	
		1,842
Total		6,652

Diseases of the Eye.

Lids.

Erysipelas	1
Eczema	10
Abscess	17
Blepharadenitis	226
Hordeolum	37
Chalazion	86
Ectropium	13
Entropium	13
Trichiasis	61
Distichiasis	2
Ptosis	6
Symblepharon	4
Anchyloblepharon	1
Œdema	37
Epitheloid	1
Epithelioma	7
Warts	9
Epidermic growth	1
Nævus	1
Xanthelasma	

Lupus	1
Herpes Zoster Ophthalmicus	1
Ulcer	
Herpes	1
Tumor	8
Supernumerary lid	1
Pediculi ciliarum	1
Rodent ulcer	
Tumor, near lid	3
Furuncle	1
Blepharitis	

Conjunctiva.

Conjunctivitis, catarrhal	708
" blenorrhoic	13
" " neonatorum	10
" granular and pannus	251
" phlyctenular	252
Ecchymosis	22
Pterygium	30
Pinguecula	4
Œdema	5
Tumors	3
Abscess	1
Hyperæmia	23
Discoloration of conjunctiva from nitrate of silver	
Ophthalmia, gonorrhœal	3

Cornea and Sclera.

Keratitis	197
" interstitial	7
" traumatic	19
Abscess of cornea	2
Ulcer " "	324
" " " vascular	14

Leucoma	122
Staphyloma anterir	19
Keratoconus	33
Tumor of cornea	1
Deposit of lead	2
Sclero-keratitis	7
Episcleritis	2
Scleritis	2
Rupture of sclera	

Iris.

Iritis, rheumatic	112
" syphilitic	16
" traumatic	5
Prolapse	7
Tremulous iris	2
Dialysis	3
Wound of	3
Foreign body on	5
Myosis	1
Mydriasis	15
" artificial	2
Posterior synechia	19
Anterior "	13
Discoloration	1

Choroid.

Choroiditis	38
" disseminata	
Sclerotico-choroiditis, posterior	25
Irido-choroiditis	22
" " sympathetic	19
Rupture of	2
Glaucoma	8
Suppurative choroiditis	

Staphyloma	5
Sarcoma	2
Melanotic sarcoma	2
Melanosis	1

Retina.

Hyperæmia	1
Retinitis	13
" albumenurica	4
" pigmentosa	3
" apoplectica	5
Separation of	13
Hyperæsthesia	2
Glioma	2
Œdema	2

Optic Nerve.

Œdema	1
Congestion of disk	22
Neuro-retinitis	9
Atrophy	41
Neuro-retinitis specific	

Vitreous.

Membrane and opacity of	18
Foreign body in vitreous and globe	

Lens.

Cataract, hard and soft	137
" incipient	33
" congenital	7
" traumatic	31
" cretaceous	4
" capsular	6
" posterior polar	2

Dislocation of	12
" of congenital	

Lesions of Globes.

Mikrophthalmus	
Hydrophthalmus	8
Phthisis bulbi	35
Exophthalmus	
Intraocular tumor	3
Hypæmia	2

Affections of Percipient Apparatus.

Amblyopia	80
Amaurosis	2
Hemeralopia	6
Nyctalopia	
Amblyopia ex abusu	27
Muscæ volitantes	19
Scotoma	8

Refraction and Accommodation.

Myopia	79
Hypermetropia	133
Astigmatism	5
Presbyopia	40
Asthenopia	110

Muscular Affections and Neuroses.

Paralysis and paresis, 6th pair	9
" facial	2
" 3d pair	3
Diplopia	10
Strabismus convergens	105
" divergens	8
Ciliary neuralgia	26
" " spasm	2

Insufficiency internal recti	2
Blepharospasm	8
Nystagmus	3
Neuralgia, 5th pair	9

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	153
Affections of lachrymal passages	48
Eversion of punctum	3
Abscess of lachrymal sac	31

Orbit.

Caries of	1
Abscess of	
Cyst "	
Tumor "	2

General Injuries.

Foreign bodies on conjunctiva	21
" " " cornea	282
" " " sclera	2
" " in anterior chamber	2
Burns	53
Blows and cuts	157
Abrasion of cornea	4
Unrecorded	87
Unfit	68

Recapitulation of Diseases of the Eye.

Lids	550
Conjunctiva	1,325
Cornea and sclera	721
Iris	204
Choroid	124
Retina	45

Optic nerve	73
Vitreous	18
Lens	232
Globe	48
Percipient apparatus	142
Refraction and accommodation	367
Muscular affections and neuroses	187
Lachrymal apparatus	235
Orbit	3
General injuries	521
Unrecorded	87
Unfit	68
	4,950

The seeming discrepancy in the number is accounted for by some of the patients presenting different forms of disease in the same eye.

Operations on the Eye.

Cataract.

Extraction, Method of Graefe, cataract senile	41
" " " traumatic	4
" " " soft	4
" " " hard in young adult	5
" " " congenital	5
Wecker's operation for secondary cataract	1
Extraction of glaucomatous lens	2
Extraction method of Graefe, cataract shrunken	
" " " following irido-choroiditis	4
Extraction linear, cataract senile	21
Extraction by suction, " soft	4
" of dislocated lens	1

Discission of cataract congenital	2	
" " traumatic		
		— 94
Removal of opaque capsule	4	
Noyes' double hook operation	3	
Agnew's " "	8	
		— 15

Iridectomy.

For artificial pupil	22	
" irido-choroiditis	3	
" glaucoma	5	
" iritis, old	2	
" anterior staphyloma		
" sclerokeratitis	1	
" abscess of cornea	1	
" intraocular pressure	1	
		— 35

Enucleation of Eye.

For sympathetic ophthalmia	25	
" hydrophthalmus	2	
" disorganized eye	14	
" intraocular tumor	2	
		— 43

Other Operations.

Passavant's operation for posterior synechiæ	5	
Removal of hernia of iris	5	
" anterior staphyloma		
For cystoid cicatrix		
Pterygium, Desmarre's operation (transplanting)	6	
" removal of (excision)		
Removal foreign body from iris	1	
" " " " anterior chamber	2	
" " " " globe	4	

Removal foreign body from cornea . . .	282
" " " " subconjunctiva and sclera,	1
" " " " conjunctiva . .	22
Tattooing of cornea	
Paracentesis of cornea	11
Strabismus convergens	58
" " with external suture . .	2
" " secondary operation for .	4
" divergens	3
" " with internal suture . .	
" " bringing forward int. rectus	3
Entropion	6
Trichiasis	
" Arlt's operation for	2
" Streatfield's " "	10
Bowman's operation for tear-passage . . .	26
Symblepharon	3
Canthoplasty	8
Plastic of lids	2
Chalazion	22
Epithelioma of lid	
Abscess of orbit, with caries	
" "	
Tumor "	
Miscellaneous	9
	—497
Total	684

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1875-76.

BOARD OF MANAGERS.

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J. WILEY EDMANDS, *Treasurer.*

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Second Assistant.
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ELIZA M. WHITFORD, *Matron.*

As the Infirmary is strictly a charitable institution, its patients are drawn from the most needy class in the community, whose habits of living, engendered by their poverty, render them liable, when discharged, to frequent relapses. Thus, they return again and again upon the institution, and constitute the most troublesome and distressing cases with which it has to deal. Much of this evil might be relieved were there means to ensure to such patients a purer life, for a few weeks at least, after treatment.

The Infirmary is supported, partly by a yearly grant from the State, and partly by income from invested funds. For the latter it is dependent solely upon the bequests of the charitable.

To such it makes its appeal, challenging comparison with any institution in the State for the extent and value of the service it performs for the community.

From the Treasurer's statement it appears that the expense of treating 8,122 patients during the year was $14,595.31. Of this sum probably four fifths went for the board and care of the 465 house patients, and half the remainder for medicines, supplied in all cases without charge; leaving only one tenth of the gross expense of the institution as the cost of treating the out-patients, who numbered 7,657 during the past year.

The accompanying report of the surgeons exhibits in detail the working of the institution, in their department, for the past year. This report will recommend itself both for its scientific value and as an index of the amount of labor gratuitously performed by them for the relief of the suffering poor.

For the Managers,

J. WILEY EDMANDS.
WILLARD P. PHILLIPS.
AUGUSTUS LOWELL.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen, — The Surgeons of the Massachusetts Charitable Eye and Ear Infirmary would herewith present the Annual Report for the year ending Sept. 30, 1875.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
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STATISTICS.

OCTOBER 1, 1874, TO OCTOBER 1, 1875.

CLASSIFICATION OF PATIENTS, DISEASES, AND OPERATIONS.

House Patients.

Males	274
Females	152

Out-Patients.

Whole number of eye patients	5,557
" " " ear "	2,085
Total eye and ear patients	7,642

Males	3,769	
Females	3,873	
Residents of Boston		4,239
" other parts of Massachusetts		3,057
" Maine		128
" New Hampshire		79
" Vermont		32
" Rhode Island		28
" Connecticut		17
" other States		19
" British Provinces		28
" Foreign countries		7
Unrecorded		8
		7,642

Eye patients —		
Males	2,581	
Females	2,976	
		5,557
Ear patients —		
Males	1,188	
Females	897	
		2,085
Total		7,642

Diseases of the Eye.

Lids.

Ecchymosis	2
Erysipelas	1
Eczema	18
Abscess	15
Blepharadenitis	382
Lippitudo	7
Hordeolum	49
Chalazion	66
Ectropium	14
Entropium	50
Trichiasis	9
Ptosis	6
Symblepharon	5
Anchyloblepharon	2
Œdema	16
Epitheloid	3
Epithelioma	2
Warts	4
Epidermic growths	2
Nævus	2
Xanthelasma	1
Lupus	1

Tumor	13
Tumor, near lid	1
Blepharitis	2
	673

Conjunctiva.

Conjunctivitis, catarrhal	881
" blenorrhoic	22
" " neonatorum	26
" diphtheritic	3
" granular and pannus	420
" phlyctenular	358
" traumatic	4
Ecchymosis	29
Pterygium	36
Pinguecula	6
Œdema	7
Tumor	5
Abscess	6
Hyperæmia	29
Ophthalmia, gonorrhœal	6
Foreign body on	14
	1,852

Cornea and Sclera.

Keratitis	248
" interstitial	7
" traumatic	16
Kerato-iritis	4
Abscess of cornea	9
Ulcer of cornea	410
" " " vascular	23
" " " traumatic	15
Leucoma	173

Staphyloma anterior	26
Keratoconus	2
Tumor of cornea	1
Deposit of lead	1
Foreign body on cornea	371
" " " sclera	8
Sclero-keratitis	8
Episcleritis	4
Scleritis	6
	1,332

Iris and Ciliary body.

Iritis rheumatic	152
" syphilitic	14
" traumatic	16
Prolapse of iris	3
Tremulous iris	6
Coloboma of iris	2
Dialysis	2
Wound of iris	1
Foreign body on iris	1
Ciliary injection	10
Myosis	2
Mydriasis	10
" artificial	3
Posterior synechiæ	34
Anterior "	16
Atrophy of iris	1
	273

Choroid.

Choroiditis	46
" disseminata	1
Sclerotico choroiditis posterior	72

Irido-choroiditis	12
" " sympathetic	14
Rupture of	2
Glaucoma	18
Coloboma of choroid	1
Atrophy of choroid	2
	168

Retina.

Hyperæmia	12
Retinitis	10
" apoplectica	5
" pigmentosa	5
Separation of	16
Hyperæsthesia	2
Œdema	4
Embolus central artery	1
	55

Optic Nerve.

Œdema	1
Congestion of disk	21
Neuro-retinitis	6
Atrophy	27
Neuro-retinitis specific	1
	56

Vitreous.

Floating opacities in	21
Membrane in	2
Foreign body in vitreous and globe	3
Hemorrhage into vitreous	4
	30

Lens.

Cataract, hard and soft	106
" incipient	36
" congenital	6
" cretaceous	5
" traumatic	42
" capsular	12
" posterior, polar	8
" following irido-choroiditis	1
" glaucomatous	2
" lamellar	2
Dislocation of	15
" of congenital	1
Capsulitis	1
	237

Lesions of Globe.

Hydrophthalmus	1
Phthisis bulbi	50
Exophthalmus	3
Intraocular tumor	3
Hypæmia	4
Foreign body in anterior chamber	3
	64

Affections of Percipient Apparatus.

Amblyopia	92
Amaurosis	3
Hemeralopia	11
Amblyopia ex abusu	33
Hæmiopia	2
Muscæ volitantes	24
Scotoma	4
	169

Refraction and Accommodation.

Myopia	72
Hypermetropia	332
Astigmatism	23
Presbyopia	90
Asthenopia	90
Paralysis of the Accommodation	3
	610

Muscular Affections and Neuroses.

Paralysis and paresis, 6th pair	9
" " " 3d "	13
" " " 4th "	1
Diplopia	8
Strabismus convergens	94
" " alternans	1
" " intermittens	1
" divergens	14
Ciliary neuralgia	7
" spasm	1
Insufficiency of internal recti	1
Blepharospasm	3
Nystagmus	4
Neuralgia, 5th pair	12
	169

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	175
Affections of lachrymal passages	29
Eversion of punctum	3
Congenital malformation of punctum	1
Abscess of lachrymal sac	51
Lachrymal fistula	3
	262

Orbit.

Tumor of	3

General Injuries.

Blows and cuts	176
Burns	28
Uufit and unrecorded	68

Recapitulation of Diseases of the Eye.

Lids	673
Conjunctiva	1,852
Cornea and sclera	1,332
Iris and ciliary body	273
Choroid	168
Retina	55
Optic nerve	56
Vitreous	30
Lens	237
Lesions of globe	64
Percipient Apparatus	169
Refraction and accommodation	610
Muscular affections and neuroses	169
Lachrymal apparatus	262
Orbit	3
General injuries	204
Unfit and unrecorded	68
	6,225

Operations on the Eye.

Cataract.

Extraction, Method of Graefe, cataract, senile	56
" " " " traumatic	1
" " " " soft	2

Extraction, Method of Graefe, cataract following irido-choroiditis	1
Extraction, Method of Graefe, cataract, congenital cretaceous	1
Extraction, linear, cataract, traumatic	1
" " " capsular	4
Extraction by suction, cataract, soft	11
Extraction of dislocated lens	2
Discission of cataract, congenital	1
" " traumatic	1
Removal of opaque capsule	9
Noyes' double hook operation	2
Agnew's hook operation	4
Hook operation for opaque capsule	3

Iridectomy.

Wecker's operation for lamellar cataract	3
Iridectomy for artificial pupil	15
" irido-choroiditis	7
" glaucoma	3
" iritis, old	1
" anterior staphyloma	1
" abscess of cornea	1
" intra-ocular pressure	4
" foreign body in iris	2

Enucleation of Eye.

For sympathetic ophthalmia	23
" disorganized eye	14
" intra-ocular tumor	1

Other Operations.

Passavant's operation for posterior synechiæ	9
Operation for anterior synechiæ	1

Pterygium, Desmarre's operation (transplanting)	16
" division of	1
Removal of foreign body from underneath iris	1
" " " " globe	1
" deposit of lead from cornea	1
Paracentesis of cornea	8
Strabismus convergens, single operation	27
" " double operation	17
" " with external suture	5
" " secondary operation for	2
" divergens	2
" " with bringing forward int. rectus	2
Trichiasis	5
Entropion, removal of ciliary border of lids for	11
" grooving of cartilage for	8
" Arlt's operation for	1
Bowman's operation for tear passage	11
Symblepharon	3
Canthoplasty	7
Plastic of lids	2
Chlazion	19
Tumor of orbit	2
" cornea and sclera	1
Miscellaneous	3
	340

STATISTICAL REPORT OF DISEASES OF THE EAR

Treated at the Massachusetts Charitable Eye and Ear Infirmary.

CLASSIFICATION.

Tumor of lobe	1
Abscess of auricle and meatus	10
Eczema	44
Wounds	9
Otalgia	5
Obstruction of meatus from cerumen	302
Foreign bodies in meatus	15
Otitis externa circumscripta	41
" " diffusa	36
Aspergillus	2
Myringitis	45
Perforation of membrana tympani	35
Rupture " " "	5
Destruction " " "	1
Otitis media purulenta	698
" " " with mastoid abscess	7
" " " with polypi	53
Polypoid granulations on membrana tympani	30
Otitis media catarrhalis chronica	661
" " " acuta	107
" " " subacuta	51
" " " serosa	7
" interna sive labyrinthica	14

Tinnitus aurium	12
" " associated with cerebral disease .	2
Aural hallucinations	1
Otalgia neuralgica	27
Deaf mutes	1
Deaf-mutism in seq. cerebro spinal meningitis .	1
Scalds and burns	1
Unfit and unrecorded	65

STATISTICAL REPORT OF EIGHTY OPERATIONS FOR CATARACT

Performed at the Massachusetts Charitable Eye and Ear Infirmary during the year ending Sept. 30, 1875, *by*

DRS. DERBY, SHAW, SPRAGUE, JEFFRIES, AND WILLARD.

COMPILED BY ROBERT WILLARD, M. D.

OF the eighty operations for cataract performed during the past year in the Infirmary, sixty-one were done by the method of Von Græfe, eleven by suction, five by the linear method, and three by discission, each operation being performed while the patient was fully under the anæsthetic influence of sulphuric ether. As has been the case for the past eight years, the method of Von Græfe has been preferred to all others for the extraction of uncomplicated hard cataract, it being the opinion of the surgeons that this operation gives the best resulting vision with the greatest degree of safety to the eye operated on. This operation has also been performed on eight other cases of cataract, each of which presented some variation from the ordinary hard senile lens with normal projection, and was resorted to on account of its freedom from danger to the eye. In all essential points the operation performed has closely adhered to that of Von Græfe as originally described by him. The present report is no selection of cases, the statistics here given being the result of every cataract operation done in the Infirmary for the year ending Sept. 30, 1875. The *materiel* for operation has been by no means good, comprising as it has the aged and infirm, many of whom were in a much debilitated state on entrance, and several actually suffering from other

diseases at the time, — one having diabetes, one thyroid enlargement, one abdominal tumor, and one chronic articular rheumatism. Three of the patients were found to be insane, this fact not being discovered until after the operation was performed. An earlier knowledge of their condition would have obliged the surgeon to decline the cases; two of them, however, recovered excellent vision; in one the eye was lost. The following tables give the amount of vision in sixty-one cases operated on by the method of Von Græfe. In fifty-three cases of hard cataract: —

No. Cases.	Vision.
1	$\frac{20}{20}$
1	$\frac{20}{30}$
1	$\frac{20}{40}$
1	$\frac{15}{30}$
7	$\frac{20}{50}$
9	$\frac{20}{70}$
1	$\frac{17}{70}$
10	$\frac{20}{100}$
2	$\frac{15}{100}$
1	$\frac{10}{70}$
5	$\frac{20}{200}$
1	$\frac{10}{100}$
1	$\frac{8}{80}$
1	$\frac{15}{200}$
1	$\frac{8}{200}$
1	$\frac{2}{200}$
1	Useful.
1	Quantitative.
1	Qualitative.
5	0
1	Still under treatment.
53 cases.	

In eight cases of other forms of cataract: —

No. Cases.		Vision.
2	soft cataract	$v = \frac{15}{200}$
1	post. polar	$v = \frac{10}{70}$
1	post. polar	$v = \frac{10}{100}$
1	traumatic cataract	$v = \frac{20}{70}$
1	cataract following irido-choroiditis	$v = \frac{2}{200}$
1	congenital capsular cataract	$v = \frac{2}{200}$
1	" " "	$v =$ quantitative.
8	cases.	

Taking the fraction $\frac{1}{10}$ as representing a good result, and as useful vision all below $\frac{1}{10}$ who are able to see to go about, we have the following: —

Good vision	47	
Useful vision	6	
Perception of light	3	
No vision	5	
Total	61	cases.

Several of those in the second and third classes are to return for a secondary operation to remove pupillary membrane or to form an artificial pupil, and one is still under treatment.

Of the five cases in which no vision was obtained, the result in one was due to the violence and delirium of the patient for the three days succeeding the operation; in another, to the unfavorable condition of the eye, where the vitreous was found to be fluid; and in three to panophthalmitis, once where there existed a chronic rheumatic condition, and in two instances without apparent previous cause. The average age of the patients with hard cataract was sixty-two and a half years, the oldest being eighty-three and the youngest thirty-five, thirteen of them being seventy years and upwards. The average duration of treatment was nineteen and a half days. Of the eight other cataracts, the average age was forty-five years, the extremes being respectively sixteen and sixty-eight years, and the average duration of treatment eighteen days. The recorded vision of all but a few of the cases is given as taken just before their departure from the Infirmary; of course, if examined subsequently, a great improvement would be found in almost every case.

Vitreous was lost in eight cases, — three where it was abnormally fluid, two where there was congenital cataract in

eyes not thoroughly developed, and three where there was no previously known complication. Six cases required the use of the spoon, usually Schuft's or Critchett's, to assist in the extraction of the lens, and in each of these instances vitreous was lost, but only once in any amount. As complications of the after treatment, three of the patients were insane, as before referred to; three were affected with senile delirium; and in five cases iritis was present, none of the last being very serious in their results.

The cases in which the operation of suction was resorted to number eleven, and they are for the most part traumatic cataracts complicated with serious wounds of the cornea or foreign bodies in the globe, only one being a simple soft cataract. One was lost by an accident some days subsequent to the operation, and three are to return for an iridectomy for artificial pupil. The vision obtained is as follows: —

$\frac{20}{30}$ 1 $\frac{20}{50}$ 1 $\frac{20}{70}$ 1 $\frac{13}{70}$ 1 $\frac{12}{126}$ 1 $\frac{4}{80}$ 1 $\frac{5}{200}$ 1 Qualitative 1 Quantitative 1 0..1

Total, 11 cases.

The linear operations were done on five cases, all unfavorable subjects for obtaining satisfactory vision, — four being congenital capsular cataracts with nystagmus, and one a traumatic capsular cataract of twenty years' duration. The vision obtained is as follows: —

$\frac{20}{200}$ 2. Useful vision 2. Quantitative 1.

Discission has been performed three times, — once on each eye of an infant, aged eight months, for congenital cataract, and once on an adult for traumatic cataract. When discharged both patients were doing well, but no positive result for vision could be obtained, as the lens matter had not then been absorbed.

Appended are the Tables.

EXTRACTION BY THE METHOD OF VON GRÆFE.

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
1	M.	65	Hard. O. D. senile, 10 yrs.	Good.	Normal.	Oct. 8, 1874. Ether. Græfe. Capsule removed. Iritis 21st day without apparent cause. At discharge, membrane in pupil.	40 days.	V. O. D. $\frac{20}{200}$
2	F.	64	Hard. Senile O. S. 2 yrs.	Diabetes.	Normal.	Oct. 7, 1874. Ether. Græfe. At discharge, membrane in pupil.	21 days.	V. O. S. $\frac{20}{200}$
3	F.	66	Hard. Senile O. D. 7 yrs.	Fair.	Normal.	Oct 10, 1874. Ether. Græfe. Operation passed off well.	10 days.	V. O. D. $\frac{20}{50}$
4	M.	83	Hard. Senile O. S. Over mature.	Good.	Normal.	Oct. 9, 1874. Ether. Græfe. Lens very large. Did well till 3d day, when patient took off bandage and wound reopened at inner edge, where a tag of iris remains.	19 days.	V. O. S. $\frac{15}{100}$
5	F.	74	Hard. Senile O. D. 10 years. Caps'lar opacity.	Good.	Normal.	Oct. 14, 1874. Ether. Græfe. Capsule all came away.	14 days.	V. O. D. $\frac{20}{50}$
6	F.	71	Hard. Senile O. S.	Fair.	Normal.	Oct. 7, 1874. Ether. Græfe. Patient very restless and troublesome.	19 days.	V. O. S. $\frac{20}{70}$

7	M.	65	Hard. Senile O. S. 10 yrs.	Good.	Normal.	Oct. 19, 1874. Ether. Græfe.	14 days.	V. O. S. $\frac{17}{70}$
8	M.	57	Senile. O. S.	Feeble.	Normal.	Oct. 23, 1874. Ether. Græfe. Vitreous fluid and flowed at completion of cut. Lens sank. Removed with spoon. Conjunctivitis. Wound healed slowly.	38 days.	V. O. S. $\frac{20}{50}$
9	M.	48	Senile. O. S.	Good.	Normal.	Oct. 23, 1874. Ether. Græfe. Had posterior synechiæ.	16 days.	V. O. S. $\frac{20}{100}$
10	F.	74	Senile. O. S. 10 yrs.	Good.	Normal.	Oct. 24, 1874. Ether. Græfe. Cut more in cornea than usual. Profound collapse of cornea.	23 days.	V. O. S. $\frac{8}{200}$
11	F.	56	Fluid. O. S. 12 yrs.	Good.	Normal.	Oct. 29, 1874. Ether. Græfe. Cataract wholly fluid. Opaque capsule not removed. Hemorrhage into anterior chamber 2d day.	23 days.	V. O. S. $\frac{15}{100}$
12	F.	58	Senile. O. D.	Feeble.	Normal. Corneal leucomata.	Oct. 28, 1874. Ether. Græfe. Profound collapse of cornea.	21 days.	V. O D. $\frac{20}{100}$
13	F.	42	Traumatic. O. S. 6 mos.	Good.	Normal.	Oct. 30, 1874. Ether. Græfe.	20 days.	V. O. S. $\frac{20}{70}$

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
14	F.	66	Senile. O. S. $1\frac{1}{2}$ yrs.	Fair.	Normal.	Nov. 2, 1874. Ether. Græfe. Much soft cortical removed.	16 days.	V. O. S. $\frac{20}{100}$
15	F.	40	Hard. O. D. 11 mos.	Fair.	Normal.	Nov. 3, 1874. Ether. Græfe.	16 days.	V. O. D. $\frac{20}{100}$
16	M.	48	Senile. O. D.	Good.	Normal.	Nov. 10, 1874. Ether. Græfe. Same patient as No. 9.	17 days.	V. O. D. $\frac{20}{100}$
17	M.	52	Senile. O. S.	Good.	Normal.	Nov. 16, 1874. Ether. Græfe. Secondary operation for opaque capsule. May 3, 1875.	14 days.	V. O. S. $\frac{20}{70}$
18	F.	75	Senile. O. S.	Fair.	Normal.	Nov. 18, 1874. Ether. Græfe. Vitreous fluid, escaped during operation. Lens removed with scoop. Irido-choroiditis followed. Secondary operation necessary.	40 days.	V. O. S. Quantitative.
19	M.	46	Hard. O. S. 6 months.	Good.	Normal.	Nov. 23, 1874. Ether. Græfe. Capsule left. Iritis 3d day.	30 days	V. O. S. Useful.
20	M.	66	Senile. O. S.	Good.	Normal.	Dec. 2, 1874. Ether. Græfe. Patient unruly, tore off bandages, rubbed eye, got up. Iritis 2d day, followed by panophthalmitis.	40 days.	V. O. S. 0

21	M.	48	Hard. O. S.	Fair.	Normal.	Dec. 3, 1874. Ether. Græfe. Cut more in cornea than usual. Wound closed on 10th day.	21 days.	V. O. S. $\frac{10}{70}$
22	M.	70	Senile. O. D. 5 years.	Fair.	Normal.	Jan. 9, 1875. Ether. Græfe.	19 days.	V. O. D. $\frac{20}{100}$
23	F.	71	Hard. O. D.	Poor.	Normal.	Jan. 19, 1875. Ether. Græfe.	28 days.	V. O. D. $\frac{20}{100}$
24	M.	68	Hard. O. S. 4 years.	Good.	Normal.	Jan. 22, 1875. Ether. Græfe.	15 days.	V. O. S. $\frac{20}{50}$
25	F.	57	Hard. O. D.	Good.	Normal.	Jan. 22, 1875. Ether. Græfe.	19 days.	V. O. D. $\frac{20}{50}$
26	F.	65	Senile. O. S.	Fair.	Normal.	Feb. 5, 1875. Ether. Græfe.	29 days.	V. O. S. $\frac{20}{100}$
27	F.	55	Senile.	Poor. Insane. Unknown till after operation.	Normal.	Feb. 6, 1875. Ether. Græfe. Lens dislocated into vitreous. Could not be removed. Panophthalmitis.	11 days.	V. O. S. O.
28	M.	55	Senile. O. S. 2 years.	Fair.	Fair.	Feb. 10, 1875. Ether. Græfe.	10 days.	V. O. S. $\frac{20}{100}$

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
29	F.	51	Hard. O. D.	Poor. Thyroid enlargement.	Fair.	Feb. 13, 1875. Ether. Græfe. Lens sticky, removed with scoop; a little vitreous lost. Wound remained open for three days.	14 days.	V. O. D. $\frac{15}{100}$
30	M.	73	Hard O. S. over mature. 10 yrs.	Good.	Normal.	March 9, 1875. Ether. Græfe. Patient unruly. Senile delirium. Conjunctivitis.	25 days.	V. O. S. $\frac{8}{80}$
31	M.	70	Hard O. S. over mature.	Good.	Normal.	March 16, 1875. Ether. Græfe.	14 days.	V. O. S. $\frac{15}{30}$
32	M.	66	Senile O. D.	Good.	Normal.	March 16, 1875. Ether. Græfe.	14 days.	V. O. D. $\frac{20}{50}$
33	M.	65	Senile O. S.	Good.	Normal.	April 2, 1875. Ether. Græfe. Patient unruly.	21 days.	V. O. S. $\frac{20}{70}$
34	M	53	Immature O. D. 8 years.	Good.	Normal.	April 15, 1875. Ether. Græfe. 4th day patient struck eye. Hemorrhage into anterior chamber.	27 days.	V. O. D. $\frac{15}{100}$
35	F.	77	Mature O. D. 5 years.	Poor.	Normal.	April 16, 1875. Ether. Græfe. Much cortical removed.	17 days.	V. O D. $\frac{20}{200}$

36	F.	26	Capsular cretaceous congenital. O. D.	Poor.	Normal.	April 17, 1875. Ether. Græfe. Slight escape of vitreous. Lens, and capsule removed.	18 days.	V. O. D. $\frac{2}{200}$
37	F.	64	Senile over mature O. S.	Fair.	Normal.	April 23, 1875. Ether. Græfe.	17 days.	V. O. S. $\frac{20}{70}$
38	F.	45	Semi-solid. Old irido-choroiditis O. D.	Fair.	Fair.	April 27, 1875. Ether. Græfe.	16 days.	V. O. D. $\frac{2}{200}$
39	F.	65	Senile O. D.	Good.	Normal.	April 29, 1875. Ether. Græfe.	14 days.	V. O. D. $\frac{20}{70}$
40	M.	74	Senile O. S. 1 year.	Good.	Normal.	May 9, 1875. Ether. Græfe. Pain 3d day. Senile delirium 4th day. Chemosis. Closed pupil. To return for secondary operation.	27 days.	V. O. S. Quantitative.
41	F.	65	Senile O. D. 1 year.	Good.	Normal except upwards, where projection is doubtful.	May 9, 1875. Ether. Græfe.	10 days.	V. O. D. $\frac{20}{70}$
42	M.	58	Hard. O. S. 4 yrs.	Rheumatic.	Normal.	May 13, 1875. Ether. Græfe. Scoop used. Vitreous lost. Irido-choroiditis. Eye atrophied.	32 days.	V. O. S. 0

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
43	F.	65	Mature. O. S. 1 yr.	Good.	Normal.	May 19, 1875. Ether. Græfe. Facial erysipelas May 22.	15 days.	V. O. S. $\frac{20}{50}$
44	M.	58	Senile. Hard. O. D.	Poor.	Normal.	May 14, 1875. Ether. Græfe. May 28, conjunctivitis.	14 days.	V. O. D. $\frac{15}{200}$
45	M.	78	Senile. Hard. O. S.	Fair.	Normal.	May 19, 1875. Ether. Græfe. Profound collapse of cornea.	14 days.	V. O. S. $\frac{20}{200}$
46	M.	16	Congenital. O. D.	Fair.	Normal.	June 12, 1875. Ether. Græfe. Scoop used. Considerable vitreous lost. Iritis. Closed pupil. August 9, iridectomy.	10 days.	V. O. D. Fingers at 3′.
47	M.	67	Senile. O. S. 1 yr.	Fair.	Normal.	June 14, 1875. Ether. Græfe.	16 days.	V. O. S. $\frac{20}{70}$
48	M.	70	Senile. O. S. 6 yrs.	Good.	Normal.	June 18, 1875. Ether. Græfe.	18 days.	V. O. S. $\frac{20}{70}$
49	F.	61	Senile. O. S. 1 yr.	Fair. Has large abdominal tumor.	Normal.	June 23, 1875. Ether. Græfe. Panophthalmitis. Operation followed by severe vomiting for 16 hours.	31 days.	V. O. S. 0

50	F.	60	Senile. O. D. post-polar. 3 yrs.	Good.	Normal.	June 24, 1875. Ether. Græfe. At discharge posterior capsule much thickened.	20 days.	V. O. D. $\frac{10}{100}$
51	M.	76	Senile. O. S. 6 yrs.	Poor.	Normal.	June 24, 1875. Ether. Græfe. Panophthalmitis.	20 days.	V. O. S. 0
52	M.	35	Hard. O. D. 1 year.	Fair.	Fair.	June 24, 1875. Ether. Græfe. Lens small and sticky. Low form of iritis. Capsule in pupil.	30 days.	V. O. D. $\frac{20}{200}$
53	M.	66	Senile. Hard. O. D.	Good.	Fair.	June 21, 1875. Ether. Græfe. Lens very dark. 4th and 8th days hemorrhage into vitreous and anterior chamber.	12 days.	V. O. D. Qualitative.
54	M.	73	Senile. O. S. $1\frac{1}{2}$ years.	Fair.	Fair.	July 22, 1875. Ether. Græfe. Some vitreous lost. Profound collapse of cornea. Senile dementia. Patient unruly and violent.	25 days.	V. O. S. $\frac{20}{100}$
55	M.	52	Senile. O. S. $1\frac{1}{2}$ years.	Good.	Normal.	July 24, 1875. Ether. Græfe.	16 days.	V. O. S. $\frac{20}{40}$
56	M.	43	Hard. O. S. 2 years.	Poor.	Normal.	July 30, 1875. Ether. Græfe.	11 days.	V. O. S. $\frac{20}{30}$

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
57	M.	68	Post-polar. O. S.	Fair.	Normal.	July 31, 1875. Ether. Græfe.	11 days.	V. O. S. $\frac{10}{70}$
58	M.	55	Senile. O. D. 3 years.	Good.	Normal.	Aug. 26, 1875. Ether. Græfe.	14 days.	V. O. D. $\frac{20}{20}$
59	F.	67	Senile. O. D.	Fair.	Normal.	Sept. 8, 1875. Ether. Græfe. Wound healed slowly.	28 days.	V. O. D. $\frac{20}{70}$
60	M.	60	Senile. O. S.	Fair.	Normal.	Sept. 20, 1875. Ether. Græfe. Conjunctivitis. Senile dementia.	12 days.	V. O. S. $\frac{10}{100}$
61	M.	60	Over-mature. O. S.	Fair.	Normal.	Sept. 28, 1875. Ether. Græfe. Scoop used for sunken lens. Vitreous lost. Wound open for one week.	Still under treatment.	V. O. S.

REMOVAL OF CATARACT BY SUCTION METHOD.

62	M.	13	Traumatic. Soft. 6 mos. O. S.	Fair.	Good.	Oct. 13, 1874. Ether. Suction. Doing well up to third day, when was struck in eye by a patient accidentally: panophthalmitis.	101 d'ys.	V. O. S. 0.
63	M.	63	Traumatic. Soft. O. S.	Good.	Normal.	Dec. 23, 1874. Ether. Suction.	8 days.	V. O. S. $\frac{20}{50}$

64	M.	48	Traumatic. O. S. 24 days. Cornea split. Dec. 4, piece of wood removed from beneath iris.	Good.		Dec. 26, 1874. Ether. Suction. Eye healed well. Cornea very irregular. Patient to return for artificial pupil.	13 days.	V. O. S. Qualitative.
65	F.	10	Soft. 10 mos. Traumatic. O. D.	Good.	Normal.	Jan. 14, 1875. Ether. Suction.	7 days.	V. O. D. Qualitative.
66	M.	24	Traumatic. O. S. 2 weeks. Explosion of blasting p'wder. O. D. destroyed.	Good.		June 11, 1875. Ether. Suction. Aug. 19, 1875. Iridectomy for artificial pupil on O. S.	43 days.	V. O. S. $\frac{12}{126}$
67	F.	19	Traumatic. O. D. few days, Probably foreign body in the eye.	Good.	Fair.	July 20, 1875. Ether. Suction.	4 days.	V. O. D. $\frac{5}{200}$
68	M.	26	Traumatic. O. S.	Good.	Normal.	Aug. 11, 1875. Ether. Suction.	7 days.	V. O. S. $\frac{20}{70}$
69	F.	30	Soft. 6 mos. O. S.	Good.	Normal.	Aug. 12, 1875. Ether. Suction.	6 days.	V. O. S. $\frac{20}{30}$

No.	Sex.	Age.	Quality and Duration of the Cataract.	General Health.	Functional Examination.	Date. Operation. Anæsthesia. Remarks.	Duration of Treatment.	Resulting Vision.
70	M.	25	Traumatic. O. S. 2 weeks.	Good.	Normal.	Aug. 19, 1875. Ether. Suction.	11 days.	V. O. S. $\frac{13}{70}$
71	M.	35	Traumatic O.S. 5 weeks. Large scar on cornea.	Good.		Aug. 29, 1875. Ether. Suction. To return for iridectomy for artificial pupil.	5 days	V. O. S. $\frac{4}{80}$
72	F.	26	Traumatic. 2 days O. D. Probably foreign body in eye. Wound of cornea.	Good.	Fair.	Sept. 2, 1875. Ether. Suction. To return for iridectomy.	20 days	V. O. D. Quantitative.
			EXTRACTION OF CATARACT BY THE LINEAR METHOD.					
73	F.	28	Capsular traumatic 20 years O. S.	Good.	Poor.	Feb. 24, 1875. Ether. Linear.	15 days.	V. O. S. Fingers at 2′.
74 75	F.	11	Congenital capsular. O.U.	Fair.	Very poor. Nystagmus.	June 15, 1875. Ether. Linear operations passed off well. Patient unruly, tore off bandages. Wept and was entirely uncontrollable for some days.	35 days.	V. O. D. Quantitative. V.O.S. Counts fingers at 1′.

76 77	M.	14	Congenital capsular. O. U.	Fair.	Fair O. D. Poor O. S. Nystagmus. Tremulous iris.	June 16, 1875. Ether. Linear. Considerable capsule removed.	7 days.	V. O. D. $\frac{20}{200}$. V. O. S. $\frac{20}{200}$.

DISCISSION.

78	M.	8 mos.	Congenital O.U	Good.		Oct. 29, 1874. Ether. Discission. At discharge absorption going on quietly.	5 days.	V. not obt'nd. Patient too young.
79 80	M.	19	Traumatic. O. D.	Good.		June 19, 1875. Ether. Discission. At discharge doing well. To return for examination of V.	4 days.	

FIFTY-FIRST

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1876.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
34 School Street.

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1876-77.

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Ophthalmic Interne.
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HENRY W. BRADFORD, M. D.

GEORGE STEDMAN, M. D., *Superintendent.*
ELIZA M. WHITFORD, *Matron.*

In behalf of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the Report of the Surgeons for the year 1876.

Their well-known ability in the line of their profession, with large opportunities for experimental study, has given importance to their annual reports as records of practical results, interesting and valuable to those engaged in treatment of eye diseases. The publication of them measurably serves to widen the compass of the Infirmary's work beyond the circle of its own patients, and thus enhance its utility.

Although the statistics of the past year may furnish no notable cases in ophthalmic surgery of special interest professionally, there has been no cessation of the routine work of the Infirmary, and no intermission in its demand upon the time and attention of those in charge.

It should be known by those interested in charitable appropriations, that the services of the surgeons are given without compensation from the Infirmary or its patients, this gratuity of service enabling it to enlarge its benefits proportionately.

It is most gratifying to be able to make mention of donations, which occasionally come anonymously from persons who at some time have been relieved at the Infirmary, in small sums, even as low as twenty-five cents, — pittances from large and grateful hearts. One thousand dollars was received in the past year, a bequest from a lady in remembrance of the successful treatment she once received at the Infirmary.

We have had help from another source, which we should rejoice to believe has an element of permanence, — the Hospital Sunday Fund. The amount received was $604.27.

The appropriation by the Legislature was $7,500. The receipts from permanent investments income were $6,325.74. Received from donations (including $8[illegible]0 from those willing to pay something for board) $2,000.

Receipts from all sources, during the year, including the $1000 bequest, were $16,440.01. The expenses amount to $15,375.31.

The number of cases treated for eye and ear is 8,452. The number of beds in the house is 48.

Since the separation of the two departments, and the organization of the ear department five years ago, which secured the services of Dr. Blake, more special attention has been given to ear complaints, and the number of cases has greatly increased. The number treated for ear diseases during the year past is under 2,256, being 25 per cent more than in the previous year.

Some increase in the expenses of the next year may be expected, on account of the continued ratio of yearly increase in the number of applicants. They may be estimated at $16,000.

We must look to the same sources for maintenance the coming year as in the past.

The income from permanent investments, available for current expenses, will not be materially changed.

A petition will be made to the Legislature to continue the appropriation of $7,500, and there is every reason to believe that it will be granted.

The amount to come from donations is too uncertain for a reliable estimate, but it is from this source that there has been mainly drawn the means to establish the Infirmary upon its present permanent foundation and (with the State aid) to sustain it free from debt; and having an earnest in the past that this source will, with the gradually increasing income from permanent funds, ultimately be found adequate to all

requirements, let us hope that timely contributions will be made, during the coming year, applicable to current expenses.

There are two classes of patients to provide for, — the out-patients, who come daily for treatment, and the house-patients, requiring bed and board. Although the out-patients are increasing every year, if the Infirmary had this class only to attend to, there would be no lack of means to provide for all applicants, supposing the largest ratio of increase yearly.

The house-patients are those requiring medical treatment in order that they may receive the full benefit of the surgical operations, and that care and attention which they cannot have at their places of abode. It is this class, comparatively small in numbers, which causes the larger part of the expenditures. In the early years of the institution the treatment was confined to out-patients, and was comparatively inexpensive; but the need of proper medical attention for many of them was so urgent that the Infirmary was enlarged, by the erection of the new building, to meet these cases. There is now a pressure for increased accommodations in the house, but our means will not warrant the construction of more wards and the additional cost of maintaining them. The managers do not think it prudent to undertake an enlargement in the present unpropitious state of the times, but they indulge the hope that the day is not distant when the blessings of the Infirmary may be extended to every indigent patient whose condition absolutely requires a free bed in the house.

There are some, at the present day, who do not favor public charities, on account of the alleged abuse of them by the undeserving and their supposed tendency to increase pauperism by encouraging idleness and an indisposition on the part of those receiving alms to provide for themselves.

Our Eye Infirmaries, in their special work, are not subject to criticism in this respect. Injury to the eye takes from the poor man, willing to work, the ability to maintain himself

and family, and their office is to restore him to a condition of self-support. No person voluntarily inflicts injury on his eyes, and as no applicant can feign a condition not real, any imposition upon the charity is out of the question. The relief, too, is generally administered on the occurrence of the accident or disease, and thus prolonged disability and consequent impoverishment is prevented. The use of the eye is the first requirement of self-dependence, and as the beneficiaries of public Eye Infirmaries are the afflicted of the poorer class, they may in truth be called institutions for the prevention of pauperism. That scheme of benevolence has superior claims upon the public which not only gives relief to the unfortunate sufferer, but also lessens the numbers dependent on alms.

The Massachusetts Charitable Eye and Ear Infirmary is of no slight importance to the community, viewing it merely in the light of economic policy, as many of those seeking relief would be candidates for the almshouses if deprived of the treatment necessary to their cases. The money cost of maintaining the institution is small compared with its results. Its funds are utilized in the largest measure through economy of administration, and to the greatest advantage, in view of the consequences to the afflicted if not relieved, and we would emphasize this fact, in presenting the claims of this public charity, as a prominent feature in its administrative character, worthy of the attention of the benevolent when distributing their charitable gifts.

J. WILEY EDMANDS, *Treasurer.*
EDWARD I. BROWNE, *Secretary.*

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary: —

Gentlemen, — The Surgeons of the Massachusetts Charitable Eye and Ear Infirmary would herewith present the Annual Report for the year ending Sept. 30, 1876.

It will be seen, by reference to the following table, that the number of patients treated at the Infirmary has, for some time, been steadily increasing.

YEAR.	OUT PATIENTS.	HOUSE PATIENTS.	TOTAL.
1866-67.....	3,580	338	3,918
1868–69.....	4,448	352	4,800
1870–71. ...	5,258	342	5,600
1871–72.....	5,975	451	6,426
1872–73.....	6,283	429	6,711
1873–74.....	7,099	396	7,495
1874–75.....	7,642	426	8,068
1875–76	8,022	431	8,452

The figures for the present year do not show quite the usual increase. The necessity for increased economy that has been felt by all classes during the recent period of business depression has deprived many of our poorer patients from the country of the means of defraying their necessary travelling expenses, and hence kept them from visiting the institution.

It will, however, be observed that the house patients are

as numerous as usual; indeed, the accommodations of the Infirmary have long been taxed to their utmost. No increase in these numbers can be expected until existing wards are enlarged or new ones added, the desirability of which latter course we again commend to your notice. An outbreak of diphtheritic conjunctivitis and of erysipelas compelled us to suspend all operations for the space of three weeks, there being no suitable facilities for isolating the patients attacked. The erection, on our ample grounds, of a new pavilion ward, containing modern improvements in the way of heating, ventilation, and special conveniences, would materially increase the facilities of the Infirmary, and add to its usefulness, both to science and to humanity. We trust you may deem it advisable, at the present time, to commend such a project to the generosity of the community.

Your liberality in increasing our staff of assistants has lightened our individual labors and enabled us to do better justice to those applying for relief. Special acknowledgments are due to the superintendent, Dr. Stedman, for his excellent administration of our internal affairs. Our mutual relations have been as pleasant as harmonious.

The continued illness of the president still deprives us of his counsel and presence. His enforced absence during the past year has been to us a source of the deepest regret.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1875, to October 1, 1876.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	265
Females	166

Out-Patients.

Whole number of eye patients		5,754
" " " ear "		2,268
Total eye and ear patients		8,022
Males	4,306	
Females	3,716	
Residents of Boston		4,873
" other parts of Massachusetts		2,907
" Maine		97
" New Hampshire		67
" Vermont		16
" Rhode Island		20
" Connecticut		10
" other States		16
" British Provinces		15
" Foreign countries		0
Unrecorded		1
		8,022

Eye patients —		
Males	2,980	
Females	2,774	
		5,754
Ear patients —		
Males	1,326	
Females	942	
		2,268
Total		8,022

Diseases of the Eye.

Lids.

Ecchymosis	1
Erysipelas	1
Eczema	20
Abscess	28
Blepharoadenitis	353
Lippitudo	6
Hordeolum	45
Chalazion	103
Cyst	1
Ectropium	5
Entropium	8
Trichiasis	21
Distichiasis	4
Ptosis	4
Symblepharon	2
Anchyloblepharon	2
Œdema	11
Epitheloid	2
Epithelioma	9
Warts	7
Mole	2

Epidermic growth	1
Nævus	3
Rodent ulcer	1
Herpes	1
Tumor	14
Tumor near lid	1
Blepharitis	5
	651

Conjunctiva.

Conjunctivitis, catarrhal	959
" blenorrhoic	21
" " neonatorum	21
" granular, with pannus	354
" phlyctenular	295
" traumatic	21
Chemosis	3
Ecchymosis	17
Pterygium	30
Pinguecula	13
Ulcer	1
Tumor	2
Abscess	1
Hyperæmia	14
Ophthalmia, gonorrhœal	3
Foreign body on	30
Wound of	1
	1,786

Cornea and Sclera.

Keratitis	267
" interstitial	8
" traumatic	18
Kerato-iritis	18

Abscess of cornea	10
Ulcer of cornea	366
" " " vascular	23
" " " traumatic	19
Leucoma	151
Rupture of cornea	1
Staphyloma anterior	20
Keratoconus	1
Abrasion of cornea	18
Deposit of lead on cornea	1
Foreign body on cornea	331
" " " sclera	5
Sclero-keratitis	23
Episcleritis	3
Scleritis	12
Rupture of sclera	3
	1,298

Iris and Ciliary Body.

Iritis, rheumatic	104
" syphilitic	20
" traumatic	10
Prolapse of iris	3
Tremulous iris	2
Coloboma of iris	3
Dialysis	1
Wound of iris	1
Foreign body on iris	5
Cyst of iris	1
Tumor of iris	1
Mydriasis	15
Posterior synechiæ	9
Anterior synechiæ	14
	189

Choroid.

Choroiditis	46
" disseminata	1
Sclerotico-choroiditis posterior	30
Irido-choroiditis	10
" " sympathetic	9
Rupture of choroid	1
Glaucoma	10
	107

Retina.

Hyperæmia	1
Retinitis	5
" apoplectica	3
" albumenurica	1
Separation of	15
Hyperæsthesia	2
Œdema	3
Glioma	1
Disease of macula lutea	1
	32

Optic nerve.

Congestion of disk	24
Neuro-retinitis	21
Atrophy	40
	85

Vitreous.

Opacities	17
Foreign body	1
Hemorrhage	9
	27

Lens.

Cataract, hard and soft	71
" incipient	29
" congenital	7
" cretaceous	3
" traumatic	33
" capsular	3
" posterior polar	8
" secondary	1
" lamellar	3
Dislocation of lens	6
Aphakia	2
	166

Lesions of Globe.

Hydrophthalmus	3
Phthisis bulbi	31
Exophthalmus	3
Intraocular tumor	2
Rupture of globe	4
Wound " "	2
	45

Affections of Percipient Apparatus.

Amblyopia	63
Amaurosis	1
Hemeralopia	13
Amblyopia ex abusu	8
Muscæ volitantes	13
Scotoma	4
	102

Refraction and Accommodation.

Myopia	97
Hypermetropia	341
Astigmatism	34
Presbyopia	18
Asthenopia	68
	558

Muscular Affections and Neuroses.

Paralysis of facial	1
Paralysis and paresis, 3d pair	3
Paralysis, 6th pair	3
Diplopia	10
Strabismus convergens	102
" divergens	10
Ciliary neuralgia	6
" spasm	1
Insufficiency of internal recti	1
Blepharospasmus	7
Nystagmus	
Neuralgia, 5th pair	16
Paralysis " "	1
	162

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	192
Affections of lachrymal passages	12
Eversion of punctum	4
Abscess of lachrymal sac	33
Lachrymal fistula	5
	246

General Injuries.

Blows and cuts	146
Burns	38
Unfit	15
Unrecorded	141
	340

Recapitulation of Diseases of the Eye.

Lids	651
Conjunctiva	1,786
Cornea and sclera	1,298
Iris and ciliary body	189
Choroid	107
Retina	32
Optic nerve	85
Vitreous	27
Lens	166
Lesions of globe	45
Percipient apparatus	102
Refraction and accommodation	558
Muscular affections and neuroses	162
Lachrymal apparatus	246
General injuries	184
Unfit and unrecorded	156
	5,795

Operations on the Eye.

Cataract.

Extraction,	Method of Graefe,				cataract, senile	50
"	"	"	"	"	traumatic	2
"	"	"	"	"	shrunken	2
"		Linear	"		soft	6

Extraction, by suction	12
" of dislocated lens	1
" of congenital cataract	2
Discission of cataract congenital	1
" " " traumatic	1
Removal of opaque capsule	8
Noyes' double-hook operation	3
Agnew's capsule operation	1

Iridectomy.

For artificial pupil	23
" lamellar cataract	2
" irido-choroiditis	5
" glaucoma	2
" chronic iritis	1
" keratitis	2
" removal of tumor of iris	2

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened	35
" disorganized eye	8
" intraocular tumor	4

Other Operations.

Passavant's operation for posterior synechia	1
Removal of hernia of iris	1
Pterygium, Desmarre's	4
Peritomy	1
Paracentesis of cornea	4
Sæmisch's operation, for ulcus corneæ serpens	1
Strabismus convergens	69
" divergens	3

Trichiasis	4
" Arlt's operation	1
" Streatfeild's operation	7
Symblepharon, Teale's operation . . .	3
" transplantation of rabbit's conjunctiva	1
Canthoplasty	5
Plastic of lids	2
Chalazion	7
Ptosis	1
Epithelioma of lids (galvanic cautery) . .	6
" " "	2
Cyst of lid	1
Miscellaneous	12
	309

STATISTICAL REPORT OF DISEASES OF THE EAR

Treated at the Massachusetts Charitable Eye and Ear Infirmary.

CLASSIFICATION.

Tumor of lobe	4
Abscess of auricle and meatus	12
Eczema " " "	56
Wounds " " "	1
Otalgia " " "	8
Obstruction of meatus from cerumen	327
Foreign bodies in meatus	19
Otitis externa circumscripta	87
" " diffusa	45
Aspergillus	2
Myringitis	4
Rupture of membrana tympani	6
Perforation of " "	12
Polypoid granulations on membrana tympani	7
Otitis media purulenta	553
" " " with abscess of mastoid process	4
" " " with polypi	53
" " catarrhalis chronica	547
" " " acuta	178
" " " sub-acuta	138
" " " serosa	4
" interna s. labyrinthica	19
Tinnitus aurium, associated with cerebral disease	33
Otalgia neuralgica	25

Deaf-mutism in scarlet fever	1
Unfit	83
Unrecorded	35
Scalds and burns	1
Fissure of lobe	1
Epithelioma	2
	2,268

STATISTICAL REPORT OF FIFTY OPERATIONS FOR CATARACT.

Fifty cataract extractions were done by the method of Von Græfe during the current year.

Anæsthesia by sulphuric ether was, as usual, produced in every case.

The table of results is appended. These determinations of vision were necessarily made at the time of discharge of each patient, and are by no means to be regarded as final.

Vision $\frac{20}{30}$	1	Vision $\frac{3}{36}$	1
" $\frac{20}{40}$	2	" $\frac{7}{200}$	1
" $\frac{20}{50}$	3	Fingers counted in 9′	1
" $\frac{6}{18}$	2	" " " 3′	1
" $\frac{15}{50}$	2	Quantitative perception	3
" $\frac{20}{70}$	6	Total loss	1
" $\frac{10}{40}$	6	Still under treatment	2
" $\frac{20}{100}$	5	Not stated	4
" $\frac{6}{36}$	3		—
" $\frac{10}{70}$	2		50
" $\frac{5}{50}$	4		

Many of the cases here reported were exceptionally unfavorable, a questionable prognosis having been, in the outset, established, and the operation performed after consultation, and to give the patient the benefit of the doubt. In many other ophthalmic institutions the percentage of success is materially raised by the superior physique of the individuals able to occupy private rooms, the result of operations on whom goes to swell the total statistics. This Infirmary has no private rooms, and its patients come solely from the ranks of the poor.

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
1	M.	65	Senile.	Oct. 1, '75.	Normal.	Very restless; constantly removed bandage; went about house on third day. Hemorrhage into anterior chamber occurred after this.	24 days.	V. $\frac{5}{50}$
2	F.	72	Senile.	Oct. 13, '75.	Normal.	Some senile delirium during convalescence.	23 days.	V. $\frac{10}{70}$
3	F.	65	Senile.	Oct. 29, '75.	Normal.		14 days.	V. $\frac{20}{100}$
4	M.	50	Senile.	Oct. 30, '75.	Much hemorrhage. Some cortical left in pupil.		22 days.	V. $\frac{20}{40}$
5	F.	77	Senile.	Nov. 5, '75.	Normal.	No anterior chamber for fifteen days after operation.	35 days.	V. $\frac{20}{70}$
6	M.	61	Senile.	Nov. 20, '75.	Normal.		19 days.	V. $\frac{20}{70}$
7	M.	70	Senile.	Nov. 20, '75.	Normal.	Iritis and closure of pupil ensued. A secondary operation for artificial pupil was performed the following spring, without permanent result. A third operation by Wecker's scissors gave result as recorded. The cataract in this case was not mature, but had long been stationary.	39 days.	Perception of large objects. V. $\frac{10}{30}$

8	M.	50	Senile.	Nov. 21, '75.	Normal.	Much hemorrhage into anterior chamber. Pupil, at time of discharge, filled with membrane.	27 days.	V. $\frac{20}{100}$
9	M.	33	Traumatic.	Nov. 23, '75.	Escape of vitreous, scoop used to remove lens, some cortical left behind.	Eye injured by a blow fifteen years before. Good perception of light before operation. Irido-choroiditis ensued.	36 days.	V. $\frac{1}{0}$
10	M.	63	Senile.	Dec. 9, '75.	Normal.	Much annoyed by asthma during convalescence.	18 days.	V. $\frac{20}{100}$
11	F.	43	Hard. Mature.	Dec. 16, '75.	Vitreous presented, rendering use of scoop necessary.	Capsule in pupil.	31 days.	V. $\frac{20}{70}$
12	M.	65	Senile.	Dec. 9, '75.	Normal.		21 days.	V. $\frac{20}{40}$
13	F.	55	Senile.	Dec. 16, '75.	Normal.	Slight iritis.	30 days.	V. $\frac{15}{50}$
14	M.	70	Senile.	Dec. 20, '75.	Normal.		28 days.	V. $\frac{20}{70}$
15	F.	49		Dec. 30, '75.	Normal.	To return for secondary operation, there being membrane in pupil at time of discharge.	19 days.	V. $\frac{7}{200}$
16	F.	39	Senile. Hard.	Dec. 31, '76.	Slight loss of vitreous.	Patient childish and rather troublesome.	15 days.	V. $\frac{20}{100}$

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
17	F.	67	Hard. Senile.	Jan. 13, '76.	Normal.	An unpromising case, patient's health being very feeble. The other eye was rapidly failing, and this operation was therefore performed. Slight iritis ensued.	13 days.	
18	M.	50		Jan. 14, '76.	Some cortical could not be removed.		8 days.	Counts fingers in nine feet.
19	M.	64	Hard. Senile.	Jan. 17, '76.	Normal.		23 days.	V. $\frac{20}{50}$
20	F.	26	Hard.	Jan. 17, '76.	Normal.		12 days.	V. $\frac{10}{40}$
21	M.	67	Hard. Senile.	Feb. 2, '76.	Normal.	Iritis, much pain for over two weeks.	35 days.	V. $\frac{10}{70}$
22	M.	54	Hard. Senile.	Feb. 3, '76.	Profuse bleeding.		18 days.	V. $\frac{20}{50}$
23	M.	67	Senile.	Feb. 17, '76.	Much bleeding.	Slight iritis.	26 days.	V. $\frac{20}{30}$
24	M.	77	Senile.	Feb. 17, '76.	Normal.	Some opaque capsule left in pupil.	19 days.	V. $\frac{10}{100}$
25	F.	56	Over-ripe.	Mar. 8, '76.	Loss of vitreous. Lens removed by scoop, in capsule.	Iritis followed, with entire closure of pupil. To return for secondary operation.	21 days.	Quantitative perception.

26	M.	50	Senile.	Mar. 10. '76.	Normal.		28 days.	V. $\frac{20}{50}$
27	F.	60	Small nucleus. Much soft cortical.	Apr. 1, '76.	Normal.	Severe iritis, threatened suppuration of cornea. At time of discharge pupil closed. To return for secondary operation.	14 days.	Quantitative perception.
28	F.	55	Hard.	Apr. 6, '76.	Normal.		9 days.	V. $\frac{6}{24}$
29	F.	40	Probably senile. Possible choroidal trouble.	Apr. 1, '76.	Normal.		21 days.	V. $\frac{6}{24}$
30	F.	28	Capsulo-lenticular.	Apr. 12, '76.	Normal.		16 days.	V. $\frac{6}{18}$
31	F.	55	Hard. Senile.	Apr. 17, '76.	Normal.	Several severe hemorrhages into anterior chamber during convalescence.	17 days.	V. $\frac{6}{60}$
32	F.	59	Hard.	Apr. 9, '76.	Some loss of fluid vitreous.	Iritis with hypopyon. Pupil drawn upwards.	31 days.	V. $\frac{6}{60}$
33	F.	74	Senile.	Apr. 18, '76.	Normal.	Iris healed into outer edge of wound, prolapse probably encouraged by severe coughing.	34 days.	V. $\frac{6}{24}$
34	F.	55	Senile. Projection doubtful in one or two directions.	Apr. 18, '76.	Normal.	Several hemorrhages during convalescence.	42 days.	V. $\frac{6}{36}$

No.	Sex.	Age.	Nature of Cataract.	Date.	Operation.	Remarks.	Duration of Treatment.	Result.
35	M.	45	Hard. Mature.	Apr. 22, '76.	Normal.	Patient rapidly developed acute mania and became entirely uncontrollable. Severe iritis, followed by closure of pupil.	16 days.	Counts fingers in three feet.
36	M.	77	Hard. Mature.	Apr. 22, '76.	Normal.	Patient has had repeated attacks of rheumatism. Proved to be childish and wholly uncontrollable.	16 days.	At time of discharge could distinguish light. Since wrote that he could read large print.
37	F.	73	Senile.	Apr. 21, '76.	Slight loss of vitreous.		22 days.	V. $\frac{20}{70}$
38	F.	75	Senile.	Apr. 22, '76.	Normal.	Constantly removed the bandage.	23 days.	V. $\frac{3}{36}$
39	M.	71	Hard. Senile.	Apr. 27, '76.	Normal.		11 days.	V. $\frac{6}{36}$
40	F.	67	Hard. Mature.	May 6, '76.	Lens removed in capsule.		14 days.	V. $\frac{6}{24}$
41	F.	77	Hard. Mature.	May 6, '76.	Normal.	Small prolapse of iris at outer edge of wound.	34 days.	V. $\frac{4}{24}$

42	F.	50	Senile.	May 6, '76.	Normal.		23 days.	V. $\frac{6}{24}$
43	M.	45	Hard.	May 10, '76.	Loss of vitreous. Scoop used.	Blood in anterior chamber, absorbed very slowly. Pupil partly filled at time of discharge.	45 days.	Counts fingers at 1′.
44	M.	77		May 18, '76.	Normal.	Troublesome cough; general condition feeble.	25 days.	V. $\frac{20}{100}$
45	M.	78	Senile.	June 7, '76.	Much hemorrhage. Scoop used to remove lens.	Patient a confirmed opium eater, having for years taken three grains of sulphate of morphia daily. Health very feeble.	23 days.	Vision not determined.
46	M.	64	Hard. Senile.	June 9, '76.	Normal.		20 days.	V. $\frac{20}{70}$
47	M.		Hard. Senile.	Aug. 10, '76.	Normal.	Pupil filled with capsule at time of discharge. To return for secondary operation.		
48	F.	72	Hard. Senile.	Aug. 31, '76.	Normal.	Before operation perception of light and projection were normal. Subsequent examination with ophthalmoscope showed some atrophy of optic nerve.	11 days.	V. $\frac{15}{50}$
49	F.	52	Hard. Senile.	Sept. 21, '76.	Normal.			Still under treatment.
50	M.	77	Hard. Senile.	Sept. 25, '76.	Normal.			Still under treatment.

FORM OF A BEQUEST

TO THE

INFIRMARY.

I give and bequeath to the Massachusetts Charitable Eye and Ear Infirmary, of Boston, the sum of dollars, to be applied to the uses of said Infirmary.

FIFTY-SECOND

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1877.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
34 School Street.

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1877-78.

BOARD OF MANAGERS.

CALVIN ELLIS, M. D., *President.*
F. H. STORY, *Treasurer.*
EDWARD I. BROWNE, *Secretary.*

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R. W. HOOPER, M. D.
RUSSELL STURGIS, JR.
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WM. R. ROBESON.
WILLARD P. PHILLIPS.
ISAAC N. STODDARD.
AUGUSTUS LOWELL.
THOMAS B. CURTIS, M. D.
ROGER WOLCOTT.

CONSULTING SURGEON.

GUSTAVUS HAY, M. D.

OPHTHALMIC SURGEONS.

HASKET DERBY, M. D.
HENRY L. SHAW, M. D.
F. P. SPRAGUE, M. D.
B. JOY JEFFRIES, M. D.
ROBERT WILLARD, M. D.

AURAL SURGEONS.

HENRY L. SHAW, M. D.
CLARENCE J. BLAKE, M. D.

MICROSCOPIST AND CURATOR OF THE PATHOLOGICAL CABINET.

B. JOY JEFFRIES, M. D.

Ophthalmic Externe.
E. M. HARDING, M. D.

Ophthalmic Interne.
HENRY W. BRADFORD, M. D.

Aural Externe.
EDMUND D. SPEAR, JR., M. D.

GEORGE STEDMAN, M. D., *Superintendent.*
ELIZA M. WHITFORD, *Matron.*

REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1877.

In behalf of the managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the Report of the Surgeons for the year ending Sept. 30, 1877.

By a comparison of this report with the report submitted Sept. 30, 1876, it will be seen that the number of patients treated at the Infirmary continues steadily to increase in a rapid ratio. The aggregate of out and house patients treated during the past year is 9,087, an increase of 635 or seven and one half per cent over the year preceding.

The following table shows that this increase, although annually fluctuating in amount, has been continuously maintained during the past ten years, and has resulted within that period in much more than doubling the number of persons who annually seek relief at this institution. For the sake of brevity the comparison is made at intervals of two years.

YEAR.	TOTAL OF PATIENTS.	INCREASE PER CENT.
1866–67.....	3,918	
1868–69.....	4,800	23—
1870–71.....	5,600	17—
1872–73.....	6,711	20—
1874–75.....	8,068	20+
1876–77.....	9,087	12+

The greater service thus rendered to the public by the Infirmary entails necessarily greater expenditure; and in

spite of the utmost economy which the managers have felt justified in exercising, the increase in expenses has progressed in a ratio even more rapid than that exhibited in the growth of the number of patients. The chief explanation of this exception to the general rule, that increased numbers do not and should not usually imply an equally increased expenditure, is to be found in the changes introduced by recent science in the medical and surgical treatment of cases. Vastly more attention is now given to the general physical condition and hygienic surroundings of the patient. A very large proportion of the diseases both of the eye and ear are now attributed directly to a reduced condition of the system, growing out of insufficient nutriment, bad air, and improper living; and in the treatment of such cases surgical skill is of little avail unless the operation is supplemented by a period of more generous diet and of enforced obedience to sanitary rules. If this were not insisted upon, and if patients of this class were discharged immediately after being operated upon, or as soon as their actual condition might appear to justify, the unsanitary condition of their dwellings would, in a great number of cases, induce a speedy return of the disease, and the patient within a few months would reappear at the door of the Infirmary, to be again treated, again discharged, and to return, perhaps, again and again, with the cause of the disease never removed, and only the manifestation of it temporarily mitigated.

Believing that one radical cure is of more importance to the fame of the Infirmary, and of greater benefit to the public, than many such partial alleviations of disease, the managers have allowed the surgeons to exercise their discretion in continuing such cases in the Infirmary, and in ordering for their use stronger and more nourishing food than in usually furnished to the patients. In exercising this discretion the surgeons have used a generous liberality which has resulted in

adding largely to the household expenses, but the wisdom and humanity of which the managers do not question. At the same time, the financial condition of the Infirmary, as will be shown below, is such as requires the strictest economy in the management of the Institution, and until its resources are augmented, either by donations or by the gradual increase of income from the securities held by the treasurer, the managers fear that this really necessary and proper outlay must be kept at least within its present limits.

Another cause of large outlay during the past year has been the introduction throughout the wards of the Infirmary of a new and elaborate system of ventilation. The necessity of this has been felt with ever-increasing urgency for several years, and the managers were at length convinced that, whatever the cost, they ought not longer to delay an improvement the importance of which is estimated by modern science as paramount to almost all other agencies in the treatment of disease. The work has been done under contract by Messrs. F. Tudor & Co., and seems likely to prove a complete success.

It should be remembered that the actual cost for board is exacted from all patients whose means appear to justify it. Of the board furnished to patients during the past year, a little more than one tenth has been thus paid for. To one familiar with the great prevalence of disease among the very poor, and who knows how easily, even among those in comfortable circumstances, the balance is turned by the change of a single member of the family from a producer to a consumer, this proportion will not appear unduly small. Especially will this be the case when it is remembered how many must now be treated gratuitously, if at all, who in times of ordinary business activity would be well able to pay moderately for what they receive.

The increase in the annual expenses of the Infirmary, the chief reasons of which have been referred to above, has not

been offset by an increase of income. The sources of income are three: *first*, from invested funds; *secondly*, from gifts, which should properly be added to the permanent funds of the Institution, but which the exigency of its needs has not infrequently compelled the treasurer to expend during the year in which they have been received; and *thirdly*, from an annual grant by the Legislature.

From this last source the Infirmary received the past year $10,000; and it is hoped that the next Legislature may make a similar appropriation.

The amount received both from income, properly so termed, and from donations has very materially decreased; this decrease in the first item alone amounting to $1,039.79, as compared with the year preceding, due to the general shrinkage at the present time in the return from all kinds of securities, and not to any exceptionally unfortunate investments. The gifts or bequests of individuals being almost invariably prompted solely by their recognition of the good work done by the Infirmary, and not by solicitation on the part of the managers, must necessarily vary greatly in amount from year to year. During the past year, when the need of the Infirmary has been greater, perhaps, than ever before, the sum received in this manner has been unusually small.

It has followed, as the result of the several causes above enumerated, and possibly of others of less importance and less easy of specification, that the expenses during the past year have exceeded the receipts by the sum of $1,785.48.

This condition of affairs has received the very careful consideration of the managers. A committee, appointed for that purpose, has investigated the actual working of every department of the Infirmary, in order, if it were found possible, to introduce greater economy in the management; but their inquiries have revealed nothing that could properly be termed either extravagance or abuse. The committee could,

therefore, report but two ways of materially reducing the expenses of the Institution. The first mode of accomplishing this would be to afford the patients less liberal diet and to reduce the medical staff by abolishing the office of interne; the second would be by establishing and strictly enforcing a lower limit in the number of patients received. The first of these methods the managers are unwilling to recommend. It has always been the policy of the Infirmary to afford to its patients the very best treatment known to surgical science; and rather than depart from this policy the managers would have recourse, however unwillingly, to the second method indicated above. An obvious mode of doing this would be to insist that the Infirmary shall be what its name implies, a *Massachusetts* Institution, and to refuse to receive patients coming from other States for treatment. The managers feel that, in some manner, those States which contribute the greatest number of cases should make some pecuniary compensation for the services rendered to their citizens by the Infirmary. The State of Maine may be cited as an example, whence came, in 1875–76, ninety-seven cases to be treated gratuitously in a *Massachusetts* Infirmary. The past year this number has been increased to one hundred and twenty, as will be seen by reference to the surgeon's report. We may believe that not a few of these would otherwise, as paupers, have become a permanent charge upon their native State.

Patients of this class come to us attracted by the high reputation of the Infirmary, and by their numbers, and the distances from which they come, furnish abundant evidence of its wide-spread and not merely local usefulness.

To enforce a rule excluding all such patients would undoubtedly involve cases of great individual hardship, and it would be with extreme reluctance that the managers would resort to it.

Fortunately an alternative is still left, namely, to attempt

to increase the funds of the Institution by an appeal to the public, to individuals, and to those States which are under the heaviest obligation to it. An earnest and systematic effort in this direction may become necessary before the close of another year. The managers would, meanwhile, confidently commend this Institution as among the most worthy of our many charities, believing that its management is efficient and economical; that the very nature of its work relieves it from the common danger of ministering to instant necessity at the cost of increasing pauperism; and that its importance and benefit to the community can hardly be overestimated.

It annually receives from the community thousands of the helpless and disabled, and sends them forth once more to take their place in the ranks of the industrious and able-bodied, thus relieving the public of the burden of their support.

The managers cannot close their report without a renewed recognition of the invaluable services rendered gratuitously by the surgical staff of the Infirmary. The Institution has no resources which would enable it to pay these gentlemen, however inadequately, for their time and skill; and were it compelled to do so, it would be obliged to restrict its operation within limits which would be but a very small fractional part of the field now covered. That the Infirmary can thus, year after year, command the unpaid service of men who are acknowledged to stand at the head of their profession, is at once the chief reason and the best evidence of its widely extended usefulness.

Since the publication of the last annual report the managers of the Infirmary, in common with the general public, have been called upon to mourn the death of two men, who, in widely different spheres of work, have occupied positions of the highest importance in this community. It would not be proper, nor is it necessary, to attempt here any enumera-

tion of the varied services which they have rendered to this city and to the State. The name of Dr. Edward H. Clarke will recall to all who knew him, even by reputation only, the wise and kind physician, whose influence extended far beyond the stricter limits of a purely professional life, and was felt with weight and convincing power in the great sanitary and educational questions of the day. The name of J. Wiley Edmands is indissolubly connected with the devoted and successful administration of important charitable trusts, and with the development and growth of the manufacturing interests of the State. The loss to the Infirmary by their death is great indeed. Mr. Edmands, for a period of more than forty years, had the entire charge of the finances of the Institution, and to his sustained interest and devotion in its cause has been due a large measure of its success. In his official position as president of the Infirmary, until incapacitated by disease, Dr. Clarke ever exercised an intelligent and close oversight of its concerns, and to the last manifested an earnest interest in its work.

The managers deem themselves fortunate in having been able to fill the places thus made vacant with the gentlemen whose names appear upon the title page of this Report.

R. W. HOOPER.

ROGER WOLCOTT.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

The surgeons of the Massachusetts Charitable Eye and Ear Infirmary beg leave to present their report for the year ending Sept. 30, 1877.

The number of persons applying for relief has been steadily increasing for many years. The past year has been no exception. As this increase in the number of patients may be regarded as indicating the great need of this Institution, and the practical work which it is doing, it is specially gratifying to the surgeons.

It is impossible to estimate the benefit conferred on these patients; and, on the grounds of economy to the State, it would seem that our charity is deserving the consideration of the benevolent.

During the past year, sixty persons with total blindness, the result of cataract, have been restored to practical sight and ability to support themselves, and thus saved from a life of poverty, and from being a burden to their friends or the public. Children have been saved from impending blindness, many of whom would have grown up to be inmates of our almshouses or asylums.

The conversion of the apothecary shop into an aural waiting-room has added convenience and comfort to both surgeon and patient. The new location of the apothecary shop proves to be much more convenient than the old, and but for the

large number who now are compelled to use the entry while waiting for medicine, it would be satisfactory. It is to be hoped that the new arrangement for heating the long wards will not only prove adequate for that purpose, but also insure improved ventilation.

Our thanks are due the superintendent, Dr Stedman, for his kindness and efficiency in conducting the internal affairs of the house.

The addition to our numbers of Drs. Chas. H. Williams and Wm. S. Dennet, in the capacity of assistant surgeons, will materially aid the staff in the discharge of its constantly increasing duties.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1876, to October 1, 1877.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	254
Females	160
	414

Out-Patients.

Whole number of eye patients		6,165
" " " ear "		2,508
Total eye and ear patients		8,673
Males	4,327	
Females	4,346	
Residents of Boston		5,382
" other parts of Massachusetts		2,986
" Maine		120
" New Hampshire		80
" Vermont		20
" Rhode Island		18
" Connecticut		7
" other States		28
" British Provinces and Foreign countries		23
Unrecorded		9
		8,673

Eye patients: —		
Males	3,132	
Females	3,033	
		6,165
Ear patients: —		
Males	1,195	
Females	1,313	
		2,508
		8,673

The Infirmary has supplied 1,766$\frac{3}{7}$ weeks' free board to patients, and 187 weeks' board paid.

Diseases of the Eye.

Lids.

Ecchymosis	6
Erysipelas	3
Eczema	24
Abscess	24
Blephardadenitis	376
Lippitudo	1
Hordeolum	61
Chalazion	127
Cyst	9
Ectropion	4
Entropion	9
Trichiasis	31
Distichiasis	1
Ptosis	12
Anchyloblepharon	1
Œdema	29
Epitheloid	4
Epithelioma	5
Warts	4

Epidermic growth	2
Tumor	5
Blepharitis	24
	759

Conjunctiva.

Conjunctivitis, catarrhal	925
" blenorrhoic	7
" " neonatorum	14
" granular, with pannus	140
" phlyctenular	385
" traumatic	13
" granular	266
" diphtheritic	3
Fungous granulations on conjunctiva	4
Chemosis	3
Ecchymosis	22
Pterygium	35
Pinguecula	6
Tumor	2
Hyperæmia	16
Ophthalmia, gonorrhœal	2
Foreign body on	37
Wound of	4
	1,884

Cornea and Sclera.

Keratitis	270
" interstitial	3
" traumatic	10
Kerato-iritis	12
Abscess of cornea	6
Ulcer of cornea	411
" " vascular	14
" " traumatic	21

Leucoma	228
Rupture of cornea	2
Staphyloma anterior	29
Keratoconus	1
Abrasion of cornea	43
Foreign body on cornea	297
" " " sclera	15
Sclero-keratitis	9
Episcleritis	3
Scleritis	19
Rupture of sclera	1
	1,394

Iris and Ciliary Body.

Iritis	39
" syphilitic	13
" rheumatic	85
" traumatic	5
Prolapse of iris	3
Tremulous iris	6
Coloboma of iris	1
Foreign body on iris	6
Tumor of iris	3
Mydriasis	19
Posterior synechiæ	20
Anterior synechiæ	11
	211

Choroid.

Choroiditis	41
" disseminata	1
Sclerotico-choroiditis posterior	21
Atrophy of choroid	2
Albinism	2
Panophthalmitis	2

Irido-choroiditis	8
" sympathetic	1
Rupture of choroid	4
Glaucoma	10
	92

Retina.

Retinitis pigmentosa	1
Hyperæmia	1
Retinitis	11
" apoplectica	3
" albumenurica	2
Separation of	19
Disease of macula lutea	1
	38

Optic Nerve.

Neuritis	19
Congestion of disk	4
Atrophy	69
	92

Vitreous.

Opacities	24
Foreign body	1
Hemorrhage	1
	26

Lens.

Cataract, hard and soft	120
" incipient	19
" congenital	11
" traumatic	42
" capsular	3
" posterior polar	8
" secondary	1

Dislocation of lens	12
Aphakia	3
	219

Lesions of Globe.

Hydrophthalmus	2
Phthisis bulbi	47
Exophthalmus	3
Rupture of globe	2
Wound " "	2
Tumor of orbital cavity	2
	58

Affections of Percipient Apparatus.

Amblyopia	65
Amaurosis	1
Hemeralopia	11
Amblyopia ex abusu	11
Muscæ volitantes	24
Scotoma	7
	119

Refraction and Accommodation.

Myopia	134
Hypermetropia	397
Astigmatism	39
Presbyopia	59
Asthenopia	104
	733

Muscular Affections and Neuroses.

Paralysis of facial	1
Paralysis and paresis, 3d pair	7
Paralysis, 6th pair	2
Diplopia	6

Strabismus convergens	112
" divergens	14
Ciliary neuralgia	2
" spasm	1
Insufficiency of internal recti	8
Blepharospasmus	5
Nystagmus	6
Neuralgia, 5th pair	28
Paralysis, " "	5
	197

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	212
Affections of lachrymal passages	7
Eversion of punctum	5
Abcess of lachrymal sac	36
Lachrymal fistula	6
	266

Lesions of Orbit.

Abscess	4
Intra-cranial tumor	2
	6

General Injuries.

Blows and cuts	82
Burns	26
Unfit	181
Unrecorded	195
	484

Recapitulation of Diseases of the Eye.

Lids	759
Conjunctiva	1,884
Cornea and sclera	1,394
Iris and ciliary body	211

Choroid	92
Retina	38
Optic nerve	92
Vitreous	26
Lens	219
Lesions of globe	58
Percipient apparatus	119
Refraction and accommodation	733
Muscular affections and neuroses	197
Lachrymal apparatus	266
Lesions of orbit	6
General injuries	108
Unfit and unrecorded	376
	6,578

Operations on the Eye.

Cataract.

Extraction, Method of Græfe, cataract, senile	55
" " " " traumatic	1
" " Liebriech " "	1
" " " "	1
" " Wecker " senile	1
" suction method	5
" of dislocated lens	3
Discission of cataract congenital	1
Removal of opaque capsule	9
Noyes' double-hook operation	2
Agnew's capsule "	4

Iridectomy.

For artificial pupil	18
" lamellar cataract	1
" irido-choroiditis	1

For chronic iritis	1
" removal of foreign body	1
" scleritis	1
" kerato-iritis	2
" removal of tumor of iris	1

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened	23
" disorganized eye	8
" intraocular tumor	1
" injury	4

Other Operations.

Removal of hernia of iris	4
Pterygium, Desmarre's	12
Paracentesis of cornea	6
Strabismus convergens	58
Trichiasis	2
" Arlt's operation	6
" Streatfield's operation	5
Symblepharon, Teale's operation	3
" transplantation of rabbit's conjunctiva	3
Canthoplasty	3
Plastic of lids	2
Chalazion	22
Epithelioma of lids (galvanic cautery)	4
" "	4
Miscellaneous	27
	306

STATISTICAL REPORT OF DISEASES OF THE EAR

Treated at the Massachusetts Charitable Eye and Ear Infirmary.

CLASSIFICATION.

Malformation of external ear	3
Abscess of auricle and meatus	27
Eczema " " "	27
Otalgia	10
Obstruction of meatus from cerumen	448
Foreign bodies in meatus	24
Otitis externa circumscripta	104
" " diffusa	42
Aspergillus	1
Rupture of membrana tympani	6
Perforation " "	7
Polypoid granulations on membrana tympani	4
Otitis media purulenta	596
" " " with abscess of mastoid process	15
" " " " polypi	56
" " catarrhalis chronica	623
" " " acuta	147
" " " sub-acuta	106
" " " serosa	8
" interna s. labyrinthica	21
Tinnitus aurum, associated with cerebral disease	24
Otalgia neuralgica	39

Deaf-mutism in scarlet fever	1
Fissure of lobe	1
Epithelioma	1
Unfit	117
Unrecorded	80
	2,518

STATISTICS OF SIXTY-EIGHT OPERATIONS FOR CATARACT.

The appended table gives the statistics of the cases of cataract extraction performed by the surgeons during the current year ending Sept. 30, 1877.

It has been the invariable rule at this Institution for many years to produce anæsthesia with ether in the operation for cataract. This year, however, is an exception, there having been twenty cases in which no anæsthetic was used.

Of the sixty-eight cases in which this operation was performed: —

55 were by the method of Græfe for senile cataract.
5 were by the method of Græfe for other kinds of cataract.
1 was by the method of Wecker for senile cataract.
1 was by the method of Liebreich for senile cataract.
1 was by the method of Liebreich for other than senile cataract.
5 were by the method of Suction for soft cataract.

The vision resulting arter the operations for senile cataract is as follows: —

Vision	$\frac{6}{6}$	2	
"	$\frac{6}{9}$	1	
"	$\frac{6}{12}$	2	
"	$\frac{6}{18}$	12	
"	$\frac{6}{24}$	6	
"	$\frac{6}{36}$	6	
"	$\frac{15}{40}$	1	
"	$\frac{5}{36}$	1	
"	$\frac{9}{60}$	1	
"	$\frac{6}{60}$	2	
"	$\frac{2}{9}$	1	
"	$\frac{3}{60}$	3	
Vision	$\frac{2}{60}$	1	
"	$\frac{1}{60}$	2	
"	Counts fingers at 4ft.	1	
"	Counts fingers at 6′	1	
"	" " " 1′	2	
"	" "	2	
"	Qualitative perception	1	
"	Quantitative "	4	
Total loss		3	
Not ascertained		2	
		57	

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
1	F.	56	Hard.	Oct. 12, '76.	Græfe, without ether, normal.	Much lens matter in pupil at time of discharge; clearing up.	16 days.	$\frac{9}{60}$
2	M.	68	Senile.	Sept. 16, '76.	Græfe, small cut enlarged with scissors.	Iritis; some capsule left in pupil.	44 days.	$\frac{15}{40}$
3	M.	60	Senile.	Sept. 29, '76.	Græfe. Normal.		24 days.	$\frac{6}{18}$
4	M.	63	Senile.	Oct. 19, '76.	Græfe. Normal.		16 days.	$\frac{20}{20}$
5	F.	72	Senile.	Oct. 19, '76.	Græfe. Without ether.		23 days.	$\frac{6}{12}$
6	M.	42	Senile.	Oct. 25, '76.	Græfe. Normal.	The edges of corneal wound were slow in uniting.	23 days.	$\frac{6}{36}$
7	F.	76	Senile.	Nov. '76.	Græfe. Without ether.		12 days.	$\frac{6}{24}$
8	F.	60	Senile.	Nov. 17, '76.	Græfe. Scoop used to extract lens.	Patient weak and fretful.	36 days.	Counts. fingers.

9	F.	49	Senile.	Nov. 25, '76.	Græfe. Without ether.	Some capsule in pupil at time of discharge.	14 days.	$\frac{6}{18}$
10	F.	76	Senile.	Nov. 25, '76.	Wecker. No ether.	Partial prolapse of iris; irreducible; excised second day after operation. Capsule in pupil at time of discharge.	19 days.	$\frac{2}{60}$
11	M.	73	Senile.	Dec. 7, '76.	Græfe. Normal.		19 days.	$\frac{2}{9}$
12	M.	14	Soft. Traumatic. Two weeks. Posterior synechiæ.	Dec. 4, '76.	Suction. Normal.	Healing rapid. Pupil obstructed with capsule at time of discharge.	4 days.	$\frac{6}{18}$
13	M.	27	Semi-solid. Traumatic.	Jan. 8, '77.	Græfe, modified. Linear incision. Normal.		11 days.	$\frac{3}{60}$
14	M.	54	Senile.	Jan. 19, '77.	Græfe. Normal.		14 days.	$\frac{6}{18}$
15	M.	65	Senile.	Feb. 3, '77.	Græfe. Normal.	Vomiting severe after ether, followed by delirium. Has been subject to copious epistaxis almost daily for over a year. Continued several times a day while a patient at the Infirmary. Panophthalmitis.		$\frac{1}{0}$

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
16	M.	58	Hard. Traumatic.	Feb. 10, '77.	Græfe. Normal.	Operation followed by acute catarrh, which lasted nine days.	16 days.	$\frac{6}{36}$
17	F.	34	Senile.	Feb. 8, '77.	Græfe. Normal.	Counted fingers second and third days after operation. Had iritis; pupil blocked with lymph. To return for secondary operation.		Quantitative.
18	M.	37	Senile.	Feb. 12, '77.	Græfe. Normal.	Patient got up directly after operation, tore off bandage and rubbed eyes, burst wound open.	12 days.	$\frac{6}{18}$
19	M.	68	Senile.	Feb. 15, '77.	Græfe. Normal.		12 days.	$\frac{6}{24}$
20	F.	55	Senile.	Mar. 5, '77.	Græfe. No ether. Normal.		18 days.	$\frac{6}{12}$
21	M.	43	Soft. Traumatic.	Feb. 27, '77.	Suction. Normal.		7 days.	$\frac{6}{6}$
22	M.	61	Senile.	Mar. 7, '77.	Græfe. No ether. Normal		16 days.	$\frac{6}{6}$
23	F.	57	Senile.	Mar. 7, '77.	Græfe. Normal.			$\frac{6}{9}$

24	M.	32	Senile. Over-ripe.	Mar. 17. '77.	Græfe. No ether. Scoop used to bring lens to edge of wound.	Considerable corticalis left in pupil after operation; much capsule left in pupil at time of discharge. To return for secondary operation.	38 days.	$\frac{3}{60}$
25	M.	55	Senile.	Mar. 22, '77.	Græfe. No ether. Normal.	Some capsule left in pupil at time of discharge.	16 ays.	$\frac{6}{36}$
26	F.	68	Senile Over-ripe.	Apr. 12, '77.	Græfe. No ether. Small palpebral opening embarrassed cut. Free escape of vitreous.	Pain, with swelling and serous discharge, attended convalescence.	28 days.	Quantitative.
27	F.	60	Senile.	Apr. 14, '77.	Græfe. No ether. Lens escaped in capsule, accompanied by a gush of vitreous, although no undue pressure was used.	A very tedious convalescense.	35 days.	$\frac{6}{60}$
28	F.	49	Senile.	Apr. 15, '77.	Græfe. No ether. Normal.		15 days.	$\frac{6}{18}$

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
29	M.	47	Senile.	Apr. 19, '77.	Scoop used. Lens came out in capsule.		11 days.	$\frac{6}{24}$
30	F.	50	Senile.	Apr. 6, '77.	Græfe. Normal.			Not ascertained.
31	F.	60	Senile.	Apr. 13, '77.	Upper edge of lens was tilted back, rendering scoop necessary.		52 days	$\frac{6}{24}$
32	F.	68	Senile.	Apr. 23, '77.	Græfe. No ether. Vitreous presented on completion of corneal cut. Scoop used. A moderate amount of vitreous lost.	A tedious convalescence. Much redness still existing at time of discharge.	27 days.	$\frac{3}{60}$

33	M.	56	Senile.	April 27, '77.	Unusually free hemorrhage attended whole operation.	Anterior chamber cleared up very rapidly.		Not ascertained.
34	F.	50	Senile.	April 27, '77.	Græfe. Normal.			$\frac{6}{18}$
35	M.	41	Senile.	May 9, '77.	Græfe. No ether.		9 days.	$\frac{6}{18}$
36	F.	50	Senile.	May 11, '77.	Græfe. Normal.	Slight dementia.		Quantitative.
37	F.	32	Senile.	May 18, '77.	Græfe. Normal.			$\frac{6}{18}$
38	M.	60	Senile. Over-ripe.	May 28, '77.	Græfe. No ether. Normal.	A little capsule in pupil at time of discharge.	9 days.	$\frac{6}{24}$
39	F.	54	Senile.	June 3, '77.	Græfe. No ether. Normal.	Low form of iritis soon after operation. Repeated hemorrhages, small amounts, into anterior chamber.	19 days.	$\frac{1}{60}$
40	M.	69	Senile.	June 9, '77.	Græfe. No ether. Normal.	Mild form of iritis. Pupil blocked with capsule. To return for secondary operation.	23 days.	$\frac{5}{36}$

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
41	M.	47	Senile.	June 9, '77.	Græfe. Just after the extraction of the lens patient squeezed lids violently together, rupturing hyaloid and causing vitreous to escape freely.	Panophthalmitus.	40 days.	$\frac{1}{0}$
42	F.	57	Senile.	June 7, '77.	Græfe. Posterior synchiæ were ruptured before removal of lens.	Patient has been in poor health for several years. Has been treated as outpatient at Infirmary for recurrent iritis during that time. To return for secondary operation.	16 days.	$\frac{1}{60}$
43	M.	62	Senile.	June 15,'77.	Græfe. Normal.		18 days.	$\frac{6}{18}$
44	F.	60	Senile.	June 15,'77.	Græfe. Normal.	Low form of iritis closed pupil.	26 days.	Qualitative.

45	M.	66	Senile.	June 21,'77.	Græfe. Corneal cut small. Scoop used to extract lens.	Patient died of cancer of the stomach two weeks after operation. The other eye had been operated on successfully a few month before.		Counted fingers at 1.
46	M.	70	Senile.	July 1, '77.	Græfe. Large nucleus removed with scoop.	Had an attack of catarrh.	35 days.	$\frac{6}{60}$
47	M.	62	Senile.	July 3, '77.	Græfe. Normal.	Patient was very feeble and debilitated.	28 days	$\frac{6}{36}$
48	M.	36	Senile.	July 8, '77.	Græfe. Normal.		11 days.	$\frac{6}{18}$
49	M.	32	Traumatic.	June 28, '77.	Græfe. Normal.	Thin veil of capsule left in pupil. To return for secondary operation.	11 days.	$\frac{5}{60}$
50	F.	60	Senile.	June 11, '77	Græfe. Normal.		13 days.	Counts fingers at 6′.
51	M.	35	Traumatic.	July 13, '77.	Suction. Normal.	Considerable capsule left in pupil, with a small central opening. To return for secondary operation.	7 days.	$\frac{4}{60}$
52	M.	52	Senile.	July 19, '77.	Græfe. Normal.	Patient very stupid. Got out of bed and rubbed eyes. Panophthalmitis.		$\frac{1}{0}$

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
53	M.	52	Traumatic.	July 22, '77.	Suction. Normal.	Fifth day patient had keratitis. Seventh day hypopion, which disappeared on the twelfth day.	17 days.	$\frac{6}{18}$
54	M.	53	Senile. Overripe.	July 21, '77.	Græfe. Normal. Lens much shrunken.	Union of wound was slow. Cornea became cloudy fourth day, and continued so at time of discharge. Prospect of good vision.		Counts fingers at 1′.
55	F.	75	Senile.	July 28, '77.	Græfe. Normal.	Iritis ensued, attended with closure of pupil. To return for secondary operation.	25 days.	Quantitative.
56	M.	51	Soft.	Aug. 12, '77.	Suction. Normal.		7 days.	$\frac{6}{12}$
57	M.	57	Senile.	Aug. 12, '77.	Græfe. Normal.	Fifth day patient struck his eye and reopened wound. Had iritis.	13 days.	$\frac{6}{36}$
58	F.	?		Aug. 19, '77.	Liebreich's method. Williams's corneal suture used. Normal.	The cornea was cloudy in patches and its surface irregular. The operation was done in the hope of giving the patient sight enough to go about.		Counts fingers at four metres.

59	M.		Senile.	Aug. 22, '77.	Liebreich's method. Williams's corneal suture used. Normal.	Had slight prolapse of iris third day after operation, which was subsequently snipped off.		Counts fingers at 4 feet.
60	M.	65	Senile.	Sept. 3, '77.	Græfe. Normal.			$\frac{6}{18}$
61	M.	70	Senile.	Sept. 17, '77.	Græfe. No ether. Lens dislocated when operation was discontinued.			$\frac{3}{60}$
62	F.	70	Senile.	Sept. 17, '77.	Græfe. Very slight loss of vitreous.	Wound slow in uniting.		$\frac{6}{36}$
63	M.	65	Senile.	Sept. 14, '77.	Græfe. Normal.	Patient became typhoidal after operation, and was sent to hospital with prospects of fair vislon.		Counts fingers.
64	M.	69	Senile.	Sept. 15, '77.	Græfe. No ether. Normal.			$\frac{6}{18}$

No.	Sex.	Age.	Nature.	Date.	Operation.	Remarks.	Duration.	Result.
65	M.	63	Traumatic.	Sept. 18, '77.	Græfe. Escape of vitreous. Dislocation of lens. Extracted by the scoop in its capsule.	Blood remained in anterior chamber many days. Membrane in pupil at time of discharge.		$\frac{3}{60}$
66	F.	19	Congenital.	Sept. 28, '77.	Græfe. Hard white capsule removed with forceps, previous to extraction of lens.	At time of discharge pupil obstructed by capsule. Patient to return for secondary operation.	30 days.	Qualitative.
67	M.	69	Senile.	Sept. 24, '77.	Græfe. No ether. Normal		18 days.	$\frac{6}{24}$
68	F.	44	Senile.	Sept. 11, '77.	Græfe. Normal.		18 days.	$\frac{6}{36}$

FIFTY-THIRD

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1878.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
34 School Street.

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1878-79.

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REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1878.

In behalf of the managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the Report of the Surgeons for the year ending Sept. 30, 1878.

Accompanying this report is a carefully prepared table of operations for cataract, and statistics of the diseases of the eye and ear treated at the Infirmary during the year. These may be of little interest to the general reader, but they give the results of a year's careful and conscientious work, and, professionally, are of much value.

It will be seen by a comparison of this with previous reports, that the number of patients treated still continues to increase in a greater proportion than our population. This is owing, we think, not to a greater prevalence of the diseases of the eye and ear, but to a more general knowledge of the existence of the institution being disseminated.

In the report of last year the managers called attention to the changes introduced by recent science in the medical and surgical treatment of cases, which require a more generous diet and a longer stay in the Infirmary than in times past, and consequently a larger expenditure in individual cases. This, in spite of the efforts of the Board of Managers to

exercise the utmost economy, continues to render their outgo an excess of their income. We have also greatly outgrown the capacity of our building, constructed thirty years ago with the view of providing for 3,000 patients per annum. This number has now swelled to about 9,500, with a steady annual increase. Our surgeons have pressed upon us the urgent necessity of increased accommodations. There is no operating-room; there are no rooms for critical surgical cases, and no provisions for isolating infectious cases as thoroughly as is desirable; our wards and beds are full, and the number of out-patients is frequently so great as to overcrowd the waiting-rooms.

As long ago as December 29, 1825, "a meeting of gentlemen was held at the Exchange Coffee House to take into consideration the expediency of establishing an institution in this city for the relief of the poorer classes afflicted with diseases of the eye."

In the report then made by Edward Reynolds, M. D., and John Jeffries, M. D., attention was called to the great amount of serious suffering among the poor from this cause. To quote their words, "Most of these diseases, if early at-
"tended to, as they generally are where public eye infirmaries
"exist, admit of very easy and rapid cure. 'It has been
"'stated,' says the report of the New York Eye Infirmary,
"'by the medical attendants of the almshouse at Bellevue,
"that a considerable number of paupers are annually received
"and supported there, who have been reduced to the necessity
"of subsisting on the public bounty, by loss of sight, induced
"by diseases which might have been cured by attention in the
"first instance.' We have ourselves the same melancholy
"facts in our own almshouse, and it will be found that every
"charity of the kind contains a number of persons who, had
"such an institution existed as that for which we are now seek-
"ing the patronage of the benevolent, would have now been
"competent and happy in the pursuit of their various callings."

At this meeting a committee was appointed to collect subscriptions and organize the institution, which was done, and it is now little more than half a century since the Massachusetts Charitable Eye and Ear Infirmary was incorporated by act of the legislature, with the well-known and honored names of John Welles, Benjamin Joy, Robert G. Shaw, Samuel H. Walley, Edward Tuckerman, Lucius M. Sargent, Bryant P. Tilden, Edward H. Robbins, Jr., James C. Merrill, and Charles P. Curtis, Esquires, and Edward Reynolds and John Jeffries, physicians, as corporators, "for the purpose of gratuitously relieving and curing diseases of the eye and ear, and of enabling poor persons afflicted with such diseases to submit to a course of medical treatment for the same."

With the exception of the venerable Edward Reynolds, they have all passed away, as have most of their associates and many of their successors in the management of the institution; but the charity which they then founded has gone on from a very small beginning to increase its circle of usefulness year by year, and with the advance of scientfic knowledge has been able to reach much obscure disease, and relieve many in a more permanent and satisfactory manner than heretofore.

The growth of the income of the Infirmary has not, however, kept pace with the ever-increasing number of the patients, notwithstanding the receipt of many generous legacies and donations. The aid of the State has been liberally extended to us, but the gifts of private individuals have not been as large as to many other kindred institutions, though the diseases we particularly treat are of a nature to which the poorer of the working classes are especially subject. The attention of the public has been so often called to the great practical utility of the Infirmary as restoring to the working community large numbers of persons who, with

their families, would otherwise too often become residents of almshouses, that it seems hardly necessary to refer to it.

We have, however, reached that period in the growth of the Infirmary when our income year by year is insufficient to meet our expenditure, and we fear the time has arrived when we must limit our sphere of usefulness, unless we can have some definite increase of our income.

During the past year the treasurer reports the receipt of two legacies, — one from the estate of Eliza Powars, of $2,000, and one from the estate of James McGregor, of $1,000; together with donations of $2,750, from others. The whole of these sums he would gladly have added to the invested principal of the Infirmary, but a considerable sum has, of necessity, been applied to cover the deficiency in the ordinary revenue.

The income derived from dividends and interest during the year amounts to a net sum of .	$5,266 03
Contribution of the State	8,000 00
Receipts from patients for board . . .	709 98
Total available income	$13,975 98
The expenses have been	15,652 99
Showing a deficiency in ordinary income of .	$1,677 01

The donations received cannot be counted upon as a portion of the ordinary revenue, since they were not yearly subscriptions, but the voluntary gifts of the friends of the Infirmary, upon becoming acquainted with its pressing needs.

It is hoped that this appeal, made on behalf of the Board of Managers to the benevolent public, will not be in vain, since they feel that the charity is a worthy one, benefiting all classes of the community and all sects alike.

The Infirmary is conducted with the greatest economy consistent with utility, and it is believed that its running

expenses have been reduced to a minimum. The number of out-patients treated during the year was 9,043, and house-patients, 428, total, 9,471, being an increase of 384 over last year.

The staff of highly accomplished and skilful surgeons give their valuable time and experience without compensation, and there are no salaries attached to the offices. Every dollar expended goes directly for the benefit of the patients.

FRANKLIN H. STORY.
CALVIN ELLIS.
ROGER WOLCOTT.

Since the foregoing report was written we have received the following communication from the Surgeons of the Infirmary, to which we respectfully invite the attention of the friends of the institution : —

"In the report for 1877 the managers observed that it might be desirable to attempt to increase the funds of the institution by an appeal to the public, and that an earnest and systematic effort in this direction might become necessary before the close of another year. The surgeons believe that the importance of the Infirmary to the community at large has now become so great, and its present needs so pressing, that such an appeal can no longer be deferred, and they beg to submit the following to the consideration of the managers : —

"At the time of the completion and occupation of the present building, in 1850, the average annual attendance was two thousand. For this number the facilities then provided were found sufficient. But nearly ten thousand cases are now brought under our care, in the course of each year, and at the present rate of increase, this number will in ten years be

doubled. Even now our space and resources are more than exhausted. What will be the consequence of the increased demands that are sure to be made?

"We are in absolute need of the following: —

"*First.* Proper rooms for ward masters attached to each ward, and serving as quarters for an attendant who shall be clothed with authority to control the inmates of each ward, to keep it in order, and prevent, especially at night, the infractions of discipline that have been so frequent.

"*Second.* Suitable quarters for our present house-surgeon, and, at no distant day, for a colleague who shall share his responsibilities. The work of this department is already, at times, too much of a burden for one man to bear.

"*Third.* An additional building for the accommodation of the house-patients, whose numbers are now only limited by those of the beds at our disposal, and whose demands on the institution are steadily growing. The four small rooms now used are wholly inadequate to the proper treatment of the mass of contagious as well as operative cases that crowd upon us. Their number should be at least doubled.

"*Fourth.* Enlarged accommodations for the reception, examination, and treatment of the constantly increasing number of out-patients, whose requirements even now keep four surgeons and three assistants on duty at once, a great portion of the time.

"The words, in short, used by the venerable founder of the Infirmary, with reference to the original building, at the dedication of the present one, nearly thirty years ago, apply almost literally to the structure we now occupy: 'It is inconvenient in its domestic arrangements, deficient in the spaces allotted to the patients and to its attendants, medical and domestic, and unprovided with many modern contrivances demanded for the successful treatment of disease.'"

Boston, Nov. 23, 1878.

REPORT OF THE SURGEONS.

To The Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen, — The surgeons of the Massachusetts Charitable Eye and Ear Infirmary beg leave to present their report for the year ending Sept. 30, 1878.

As has been the case for many years past, the number of applicants for the benefit of the charity still continues to increase.

The present year shows a total of 9,465, against 9,087 of the year preceding. This is gratifying evidence that the services rendered by the institution continue to grow in the favor and confidence of the community. The laboring classes are apt to be distrustful of hospitals, and to neglect their maladies till suffering forces them to seek relief. The growing reputation of the Infirmary tends not only to keep such persons from the hands of charlatans, but also to cause them to apply earlier for assistance, when disease is more amenable to treatment and cure more speedy and certain.

A large proportion of the incurable affections of the eye among the poor are the direct consequence of neglect. The shorter treatment required when timely application is made, reduces the ratio of expense to the Infirmary, and is of corresponding benefit to the patient, whose time of idleness and dependence is thereby reduced.

The number of operations performed this year is also greater than that of last; these amount in all to 419; for

the preceding year there were 306. Among these are 76 cataracts, of which a separate table has been given, containing the circumstances of each case and the result obtained. Efforts are constantly being made, at home and abroad, to improve the present operation for cataract, and the results arrived at are published for purposes of comparison and instruction. The statistics furnished in the report, therefore, are not only of personal interest to the friends of the Infirmary, but have a scientific value the world over as a contribution towards solving a most important question.

A large number of the remaining operations owe their cause directly or indirectly to injuries received in the routine of daily work. Beside the evil effects of exposure and the liability to various accidents of the out-door laborer, all workers in stone and metal are particularly exposed to injuries of the eye. The frequency of such injuries can be inferred from the fact, that there have been 407 cases where the surgeons have been called upon to remove pieces of metal or other offending substance from the surface of the eyeball. In addition to giving present relief in cases of severe injury, the surgeon often has to consider and instruct the sufferer of the risk of sympathetic inflammation of the other eye, a form of disease dangerous and intractable to the last degree.

In consequence of the increased number of operations, and general duties connected with the care of patients, the necessity of a resident interne is shown more and more every year. Beside the benefit to the patients and the relief to the surgeons, the records can be more fully and accurately kept. In fact, it would be impossible for the Infirmary to maintain its present efficiency without one.

For providing due compensation for this post, and for that of externe, and also for the liberal efforts made by the managers to improve the ventilation and the hygiene of the Infirmary, the surgeons would return their sincere thanks.

The assistant surgeons, Drs. Charles H. Williams and William S. Dennet, have contributed much efficient work during the past year. The surgeons would also return their thanks to the superintendent, Dr. George Stedman, for the efficiency and courtesy with which his duties have been performed.

The positions of interne and ophthalmic and aural externe have been faithfully and acceptably filled.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1877, to October 1, 1878.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	253
Females	169
	422

Out-Patients.

Whole number of eye patients	6,482
" " " ear "	2,561
Total eye and ear patients	9,043
Residents of Boston	5,726
" other parts of Massachusetts	2,957
" Maine	140
" New Hampshire	95
" Vermont	33
" Rhode Island	24
" Connecticut	12
" other States	29
" British Provinces and Foreign countries	23
Unrecorded	4
	9,043

Eye patients: —		
Males	3,131	
Females	3,351	
		6,482
Ear patients: —		
Males	1,348	
Females	1,213	
		2,561
		9,043

Diseases of the Eye.

Lids.

Erysipelas	1
Eczema	19
Abscess	48
Blepharadenitis	306
Lippitudo	3
Hordeolum	50
Chalazion	106
Cyst	13
Ectropion	11
Entropion	8
Trichiasis	22
Ptosis	12
Anchyloblepharon	4
Symblepharon	1
Œdema	20
Epithelioma	11
Verruca	7
Chloasma	1
Xanthelasma	1
Tumor	9
Blepharitis	2
	655

Conjunctiva.

Conjunctivitis, catarrhal	1,151
" blenorrhoic	18
" " neonatorum	24
" granular, with pannus	61
" phlyctenular	274
" traumatic	17
" granular	279
" diphtheritic	3
Fungous granulations on conjunctiva	1
Chemosis	3
Ecchymosis	34
Pterygium	39
Pinguecula	9
Hyperæmia	1
Ophthalmia, gonorrhœal	4
" pustular	72
Ophthalmicus Herpes Zoster	2
Foreign body on conjunctiva	10
	2,002

Cornea and Sclera.

Keratitis	225
" interstitial	14
" traumatic	14
Kerato-iritis	7
Abscess of cornea	4
Ulcer of cornea	445
" vascular	11
" traumatic	20
Leucoma	195
Rupture of cornea	1
Staphyloma anterior	17

Keratoconus	5
Abrasion of cornea	21
Foreign body on cornea	396
" " " sclera	11
Sclero-keratitis	12
Episcleritis	4
Scleritis	15
	1,417

Iris and Ciliary Body.

Iritis	151
" syphilitic	17
" rheumatic	10
" traumatic	7
Prolapse of iris	9
Iridodonesis	4
Coloboma of iris	2
Mydriasis	14
Posterior synechiæ	2
Anterior "	6
Ciliary injection	5
Dialysis of iris	2
	229

Choroid.

Choroiditis	56
" disseminata	3
Sclerotico-choroiditis posterior	16
Panophthalmitis	2
Irido-choroiditis	14
" sympathetic	10
Glaucoma	9
	110

Retina.

Retinitis pigmentosa	2
Hyperæmia	1
Retinitis	11
" apoplectica	5
Separation of	11
	30

Optic Nerve.

Neuritis	15
Congestion of disk	2
Atrophy	56
Embolism of central artery	2
	75

Vitreous.

Opacities	15
Hemorrhage	2
	17

Lens.

Cataract, hard and soft	128
" incipient	25
" congenital	5
" traumatic	39
" capsular	3
" posterior polar	7
Dislocation of lens	12
Aphakia	1
	220

Lesions of Globe.

Hydropthalmus	2
Phthisis bulbi	28
Exophthalmus	1
Rupture of globe	1
	32

Affections of Percipient Apparatus.

Amblyopia	66
Amaurosis	1
Hemeralopia	22
Amblyopia ex abusu	16
Muscæ volitantes	16
Scotoma	5
	126

Refraction and Accommodation.

Myopia	115
Hypermetropia	355
Astigmatism	73
Presbyopia	47
Asthenopia	109
	699

Muscular Affections and Neuroses.

Paralysis of third pair	9
" fifth "	2
" sixth "	2
" accommodation	1
Diplopia	9
Strabismus convergens	105
" divergens	16
Ciliary neuralgia	15
Neuralgia fifth pair	2
Insufficiency of internal recti	14
Blepharospasmus	8
Nystagmus	11
	194

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	204
Eversion of punctum	6
Abscess of lachrymal sac	31
Lachrymal fistula	2
	243

General Injuries.

Blows and cuts	92
Burns	25
Unfit	184
Unrecorded	151
	452

Recapitulation of Diseases of the Eye.

Lids	655
Conjunctiva	2,002
Cornea and sclera	1,417
Iris and ciliary body	229
Choroid	110
Retina	30
Optic nerve	75
Vitreous	17
Lens	220
Lesions of globe	32
Percipient apparatus	126
Refraction and accommodation	699
Muscular affections and neuroses	194
Lachrymal apparatus	243
General injuries	117
Unfit and unrecorded	335
	6,501

Operations on the Eye.

Cataract.

Extraction, Method of Græfe, cataract, senile .	68
" " " " traumatic	2
" " " " congenital	1
" suction method, " soft .	13
" dislocated lens	2
Discission of cataract congenital	2
Removal of opaque capsule	2
Noyes' double hook operation	8
Removal of debris of lens	2
Division of capsule	2
Wecker's operation for sec. cataract . . .	5
Iridectomy for secondary cataract	1
	108

Iridectomy.

For artificial pupil	26
" lamellar cataract	3
" chronic iritis with closed pupil . . .	5
" removal of foreign body	1
" glaucoma	6
	41

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened,	28
" disorganized eye	21
" intraocular tumor	7
" injury	2
	58

Other Operations.

Removal of hernia of iris	3
Passavant's operation	1

Foreign body on iris	2
" " in globe	3
Deposit of lead on cornea	2
Tattooing cornea	1
Peritomy	11
Excision of anterior staphyloma	1
Pterygium, Desmarres' operation	19
" abscised	1
Strabismus convergens	68
" divergens	4
Entropion	5
Trichiasis	14
" Streatfield's operation	9
" Arlt's operation	5
" removal of portion of ciliary border	9
" destruction of lashes	1
Canthoplasty	1
Chalazion	29
Cyst of lids	5
Plastic of lids	1
Cyst of conjunctiva	1
Epithelioma of lids and conjunctiva	1
Epithelioma of lids with knife	1
" " " galvano-cautery	2
" " " knife and cautery	1
Miscellaneous	11
	212
Total	419

STATISTICAL REPORT OF DISEASES OF THE EAR.

OCT. 1, 1877, TO OCT. 1, 1878.

CLASSIFICATION.

Malformation of external ear	4
Abscess auricle and meatus	18
Eczema	35
Otalgia	15
Obstruction of meatus from cerumen	420
Foreign bodies in meatus	9
Otitis externa circumscripta	79
" " diffusa	55
Polypoid granulations on membrana tympani	9
Rupture of membrana tympani	4
Perforation " "	7
Otitis media purulenta	605
" " " with abscess of mastoid	13
" " " " polypi	59
" " catarrhalis chronica	603
" " " acuta	125
" " " sub-acuta	199
" " " serosa	3
" " " tubalis	21
" interna s. labrinthica	18
Tinnitus aurium, associated with cerebral disease	32

Otalgia neuralgica	29
Deaf-mutism	8
Fissure of lobe	3
Unfit	117
Unrecorded	48
Tumor of auricle	3
Exostosis of meatus	1
Other diseases	19
	2,561

STATISTICS OF SEVENTY-SIX OPERATIONS FOR CATARACT.

The accompanying tables contain sixty-eight cases where extraction has been done by the method of Von Græfe, and eight cases where the lens was removed by suction. The extractions comprise all those done at the Infirmary during the past year with the exception of three. These were excluded from the tables as coming under a different category. Two were cases of injury, and one a congenital cataract in a child of ten. They were all improved by the operation. Of the suction operations, thirteen have been done in all. Most of these were of traumatic origin. Statistics of eight are given. The remaining five represent severe grades of injury and were done principally to relieve pain and tension. Of the sixty-eight Græfe operations represented in the tables, the results are as follows: —

Vision $\frac{6}{6}$	1
" $\frac{6}{9}$	1
" $\frac{6}{12}$	5
" $\frac{6}{18}$	17
" $\frac{3}{9}$	1
" $\frac{6}{24}$	9
" $\frac{6}{36}$	11
" $\frac{3}{18}$	2
" $\frac{5}{36}$	1
" $\frac{3}{24}$	1
" $\frac{4\frac{1}{2}}{36}$	1
" $\frac{6}{60}$	5
" $\frac{3}{36}$	2
" $\frac{4}{60}$	1
" $\frac{2}{36}$	1
Vision $\frac{3}{60}$	1
" $\frac{2}{60}$	1
" Counts fingers at 1 metre	1
" Counts fingers at 2 metres	1
" Counts fingers at $1\frac{1}{3}$ metres	1
Perception of light with preservation of shape of globe	2
Operation abandoned	1
Not ascertained	1
	68

A few remarks on these results will not be out of place. If we take vision of one tenth as the acknowledged standard of success, and the ability to count fingers at one metre as a partial success, our results may be summarized as follows : —

RESULTS.	NO.	PER CENT.
Full success.....	55	80.9
Partial success.....	9	13.2
Failures.....	3	4.4
No record.....	1	1.5
Total.....	68	100

In the two cases of perception of light the record shows a reasonable anticipation of further improvement by time or by secondary operation. In such case the number of failures would be reduced to one, viz., the case marked abandoned. This is classified as a failure, owing to non-removal of nucleus. In point of fact, the patient gained vision of $\frac{2}{36}$ (*vide* case 19). There is also prospect of improvement in the two cases where fingers could be counted at one, and one and one third metres.

The different results given by testing the same patient at different periods, and the marked improvement often effected by time, is shown by the tables in several instances, the results being put together for the purpose of comparison. Cases No. 30, 38, and 49 may be cited as striking examples. In case 30, the patient, at time of discharge, could only count fingers. Nine weeks' later vision was $\frac{6}{60}$. In case 38 vision rose in six weeks from $\frac{2}{60}$ to $\frac{6}{36}$, and in case 49 it rose from $\frac{4}{60}$ to $\frac{6}{36}$ in five weeks. An additional illustration is afforded by case 52, which being tested five months after operation, showed vision of $\frac{6}{6}$. At time of discharge it was $\frac{6}{24}$.

In estimating results it should be borne in mind that this second testing is only possible in a limited number of cases. The Infirmary being exclusively a charitable institution, the patients all belong to the poorer classes. The great majority come from a distance, and are unable to make a second visit; thus the final result is not ascertained, and opportunities are lost for secondary operations. Such patients present much unpromising material. This is indicated by the fact that in eleven cases, the removal of the lens had to be accomplished by the scoop. These cases are numbered 1, 5, 27, 36, 39, 44, 56, 60, 61, 62, 66. With the exception of No. 1, where the patient caused escape of vitreous by a muscular movement, they all bear evidence of a damaged condition of the eye. As the introduction of the scoop is always hazardous in its consequences, a summary of the results is here given, the particulars being contained in the tables: —

No. 1.	Escape of vitreous caused by muscular movement	V. = $\frac{6}{60}$
5.	. . . . .	V. = $\frac{1}{8}$
	Secondary operation gave	$\frac{4\frac{1}{2}}{36}$
27.	Lens removed in capsule	V. = $\frac{3}{36}$
36.	. . . . .	V. = $\frac{3}{36}$
39.	Lens removed in capsule	V. = $\frac{6}{24}$
44.	. . . . .	V. = $\frac{6}{36}$
56.	. . . . .	V. = $\frac{1}{8}$
	Secondary operation gave	$\frac{4}{60}$
60.	Capsule removed	V. = $\frac{6}{24}$
61.	. . . . .	V. = $\frac{1}{8}$
62.	. . . . .	V. = $\frac{1}{8}$
66.	. . . . .	V. = $\frac{6}{24}$

Nos. 61 and 62, when discharged, afforded prospect of improvement; they are of recent date, and have had no second examination.

Besides the cases here mentioned, where the lens and cap-

sule were removed together, this was also effected in one other instance (case 22), but without the use of the scoop.

In respect to anæsthesia, there has been a change at the Infirmary during the past two years. It was formerly the custom to give ether in all cases of extraction, and this rule had but very few exceptions. During the past year, however, twenty-seven extractions have been done without ether, while in forty-one it has been administered. Without discussing the advantages and disadvantages of the two methods, which would lead us too far, it may be of interest to separate and compare the results, and though the numbers are not large, they may serve as an instalment to be added to at some future time. For more accurate comparison the primary and later results are both given, those ascertained at time of discharge, and those obtained when a later examination or a secondary operation took place.

41 Cases with Ether.			27 Cases without Ether.		
Result at time of discharge.	No.	Per cent.	Result at time of discharge.	No.	Per cent.
Full success	27	65.9	Full success	15	55.6
Partial success	10	24.4	Partial success	8	29.6
Failures	4	9.7	Failures	3	11.1
No record			No record	1	3.7
Total.....	41	100	Total.....	27	100

The following table gives the later results as far as ascertained : —

41 Cases with Ether.			27 Cases without Ether.		
Later Results.	No.	Per cent.	Later Results.	No.	Per cent.
Full success	33	80.5	Full success	22	81.5
Partial success.....	6	14.6	Partial success.....	3	11.1
Failures	2	4.9	Failures	1	3.7
No record	..	....	No record	1	3.7
Total.....	41	100	Total.....	27	100

Cases with Ether.	*Cases without Ether.*
Secondary operation 4	Secondary operation 6
Appeared for second testing and not operated on . . . 11	Appeared for second testing and not operated on . . . 7

The after treatment in most all of the non-ether cases, and some few where ether was given, has differed from the ordinary practice in one respect. The eye, if comfortable, was left unopened till the eighth day after the operation; the bandage, however, which was kept duly applied, was removed once every day, to give an opportunity to see if there was any swelling of lids, or discharge, and if unfavorable symptoms arose they were met by the usual remedies. In sixteen cases where this method was employed eserine was instilled before the operation. Eserine has also been used in some of the other cases with the view to draw the iris away from the wound and prevent the possibility of prolapse. This long closure of the eye reminds us of the old custom, when the flap operation was in vogue, of allowing the bandage to remain undisturbed for five days, unless pain supervened, and the surgeon sometimes had the misfortune to find on his first examination that suppuration had taken place without complaint on the part of the patient. The daily inspection of

the lids would prevent such trouble going on unheeded, but it is a question whether non-closure of the wound or some other unfavorable process might not exist without external manifestation, and valuable time be lost in the way of treatment. On the other hand it is claimed that the ordinary period of convalescence is shortened by keeping the eye protected from the irritating influences of the air, and that a wound of this description should be jealously guarded from all unnecessary interference.

An antiseptic method has been employed in three cases. A solution of thymol was used, of the strength of one part of thymol to fifteen hundred parts of water. The eye was bathed in this solution before and after the operation, and the instruments kept in it till wanted. After closure of the eye, a piece of thymol gauze was placed over the lids and a bandage applied. These cases are numbered 64, 65, and 68, and are among the last comprised in our list. Others have been added to them since, and will appear in the records of next year.

A division of the sexes shows thirty-eight males and thirty females. The results are compared in the following table : —

SEX.

Sex.	No.	Full Success.	Partial Success.	Failure.	No Record.
Men	38	32; 84.2%	4; 10.6%	1; 2.6%	1; 2.6%
Women . . .	30	23; 76.7%	5; 16.7%	2; 6.6%	
Total . . .	68	55; 80.9%	19; 13.2%	3; 4.4%	1; 1.5%

In age the youngest patient was thirty-three, the oldest eighty-one. Thirty-six, or a little more than half the whole

number, were from sixty to seventy, including both these ages. Seventeen were below sixty and fifteen above seventy. Following these three divisions we have, —

AGE.

Age.	No.	Full Success.	Partial Success.	Failure.	No Record.
Under 60 . .	17	14; 82.3%	2; 11.8%	1; 5.9%	—
60 to 70, inclusive . .	36	29; 80.6%	4; 11.1%	2; 5 5%	1; 2.8%
Above 70 . .	15	12; 80%	3; 20%	—	—
Total . . .	68	55; 80.9%	9; 13.2%	3; 4.4%	1; 1.5%

The different nationalities are represented as follows : —

NATIONALITY.

Nationality.	No.	Full Success.	Partial Success.	Failure.	No Record.
Americans . .	34	27; 79.4%	4; 11.8%	3; 8.8%	—
Irish	27	22; 81.5%	5; 18.5%	—	—
Br. Provinces,	5	4; 80%	—	—	1; 20.0%
English . . .	1	1; 100%	—	—	—
Scotch . . .	1	1; 100%	—	—	—
Total . . .	68	55; 80.9%	9; 13.2%	3; 4.4%	1; 1.5%

The numbers do not warrant us in drawing any full conclusion from the above summaries; still these divisions are worthy of some consideration.

In regard to details in table under the heading, "Condition of the Eye," it may be remarked that it is difficult to determine if the size of the cornea exercises any influence on the result of the operation. On the other hand it appears, as might be anticipated, that the condition of the pupil is a

symptom of importance. In most of the cases where the pupil is described as of less than normal size and dilatability, there was evidence, either at time of operation or afterward, of unfavorable conditions.

Other points of interest will be found in the tables, where, as far as recorded, the details connected with each case are given. It is impossible to judge understandingly of results without taking into consideration all surrounding circumstances. The more fully and accurately we can keep our records, the more value will our conclusions have.

The suction operations demand a few words. The exact position which this method should occupy seems still not definitely determined, but the experience at the Infirmary goes far to prove that it has a large scope of usefulness, and is a valuable addition to our resources. Those who have used it the most are the ones who have been most influenced in its favor. The instrument in use owes its construction to Drs. Willard and Dennet, and is believed to be an improvement on the usual pattern.

STATISTICS OF CATARACT OPERATIONS PERFORMED AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY, FROM OCTOBER, 1877, TO OCTOBER, 1878.

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæthesia. Remarks.	Length of Treatment.	Result.
1	M.	57	Amer.	Fair but pt. anæmic.	1 year.	Functional examination good.	Oct. 3, 1877.	Græfe up. No ether. Pt. quiet till after rupture of capsule, when attempted to close eye, causing vitreous to come. Lens removed by scoop; little disturbance or loss of vitreous; blood found on bandage at end of fifth day, but no pain and no other bad symptoms.	23 days.	V. = $\frac{6}{60}$
2	M.	70	Irish.	Poor.	Senile. Hard. 3 years.	Functional examination good. Corneal diameter 11.5 m m.	Oct. 3, 1877.	Græfe up. Ether. Cut small; lens came slowly; most of cortical removed. No bad symptoms in healing.	20 days.	V. = $\frac{6}{18}$
3	M.	69	Amer.	Good.	Senile. Hard. 2 years.	Functional examination good. Cornea 12.5 m m.	Oct. 6, 1877.	Græfe up. No ether. Cut somewhat small; lens came slowly. Patient could count fingers after operation.	21 days.	V. = $\frac{6}{24}$ 10 mos. later, $\frac{6}{12}$
4	F.	68	Irish.	Good.	Hard. 1½ years.	Functional examination good.	Oct. 6, 1877.	Græfe up. No ether. Iritis on fourteenth day.	52 days.	V. = $\frac{6}{60}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
5	M.	65	Irish.	Good.	1 year.	Functional examination good. Pupil of medium size and dilatability.	Oct. 13, 1877.	Græfe up. No ether. Patient unruly; counter puncture a little deep; capsule cut without difficulty. On attempt to press out lens, vitreous came; lens removed by scoop. Vitreous fluid, considerable lost; considerable cortical left in pupil. May 6, 1878, secondary operation: Iris divided by capsular scissors.	26 days.	Perception of light. Second operation gave 7 mos. later, V. = $\frac{4\frac{1}{2}}{36}$
6	M.	61	Nova Scotia.	Poor.	Hypermature. 5 years. History of blow.	Functional examination good. Cornea 12.5 m m.	Oct. 17, 1877.	Græfe up. No ether. Operation followed by low form of iritis. Patient taken dangerously ill, and removed from Infirmary without record of vision being obtained. When last heard from not expected to live.		Not ascertained.
7	F.	46	Am.	Fair, but patient nervous and dyspeptic.	4 years.	Functional examination good. Cornea 12 m m.	Oct. 17, 1877.	Græfe up. Ether. No bad symptoms in healing; cut united quickly, but edges slow in smoothing down.	11 days.	V. = $\frac{6}{18}$
8	F.	54	Irish.	Fair.	6 months.	Functional examination good. Cornea 12 m m.	Oct. 17, 1877.	Græfe up. Ether. Operation and healing normal.	11 days.	V. = $\frac{6}{24}$

9	M.	45	Irish.	Fair.	Soft. 3 years.	Functional examination good. Cornea 10 m m.	Oct 19, 1877.	Græfe. Ether. Small cut.	20 days.	V. = $\frac{6}{24}$ A year later, $\frac{6}{12}$
10	F.	61	Am.	Fair.	1 year.	Functional examination good.	Oct. 19, 1877.	Græfe up. Ether. Patient had some dementia on third day and tore off bandages, causing great pain; inner angle of wound forced open and iris caught in it.	22 days	V. = $\frac{6}{18}$
11	M.	53	Nova Scotia.	Good.	Soft. Congenital.	Functional examination good. Corneal diameter 11 m m.	Oct. 19, 1877.	Græfe up. Ether Capsule left in pupil. to return for secondary operation. Nov. 15, 1878, Agnew's operation.	29 days.	V. = $\frac{2}{60}$ Second operation, a year later, $\frac{6}{18}$
12	F.	53	New Brunswick.	Fair. Some hysteria.	Senile. 5 years.	Functional examination good. Cornea 12.5 m m. Choroiditis.	Oct. 20, 1877.	Græfe up. No ether. During convalescence, patient restless and nervous, and disturbed bandage; edges of cut slow in uniting smoothly. Thickened capsule in pupil at time of discharge. Secondary operation, March 21, 1878. Capsule torn across by sharp hooks. Media left clear, but ophthalmoscope shows marked choroidal trouble over whole field.	19 days	V. = $\frac{5}{60}$ Second operation, 4 mos. later. $\frac{6}{36}$
13	F.	58	New Brunswick.	Feeble.	Senile. 3 years.	Functional examination good.	Oct. 25, 1877.	Græfe up. Ether. Capsule in pupil at time of discharge.	19 days.	V. = $\frac{6}{60}$ 8 w'ks later, $\frac{6}{18}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks	Length of Treatment.	Result.
14	F.	33	Am.	Fair.	Partly soft.	Functional examination good. Pupil normal. Globes small. Ant. chamber shallow.	Nov. 3, 1877.	Græfe up. Ether. Iris came against knife before completion of cut; operation otherwise normal; lens thoroughly removed. On fourth day, severe attack of catarrh, characterized by great tenderness and chemosis. Discharge moderate. Two days later, similar attack on unoperated eye.	19 days.	V. = $\frac{6}{60}$
15	M.	71	Am.	Good.	Hard. 10 years.	Functional examination good. Cornea 12 m m.	Nov. 6, 1877.	Græfe up. No ether: eserine instilled. Small nucleus Five days later, some swelling and discharge. The day before, bandage was found off. No local uneasiness. Eighth day after operation, eye opened for the first time; much redness present and tendency to chemosis. Capsule in pupil at time of discharge. March 18, 1878, secondary operation: Incision into cornea, rupture, and withdrawal of capsule.	17 days.	V. = $\frac{2}{36}$ Second operation. $4\frac{1}{2}$ mos. later. $\frac{6}{12}$
16	F.	67	Irish.	Fair.	Senile. 2 years.	Functional examination good. Pupil small. Cornea 11.5 m m.	Nov. 7. 1877.	Græfe up. Ether; eserine instilled. Large nucleus, much bleeding Eye opened for first time on eighth day.	15 days.	V. = $\frac{6}{18}$

17	F.	71	Am.	Good.		Functional examination good. Papil dilates to $\frac{2}{3}$.	Nov 10, 1877.	Græfe up. Ether. Iris came in contact with knife before completion of cut. Operation otherwise normal. Two days later, some uneasiness; cut not well united, but became so 24 hours later and eye comfortable. Four days later, some uneasiness; bandage found displaced. Examination showed hemorrhage in ant. chamber. Two days later, this was mostly absorbed.	18 days.	V. $= \frac{6}{24}$
18	F.	76	Am.	Fair.		Dilatability of pupil, $\frac{3}{4}$.	Nov 21, 1877.	Græfe up. Ether. Iris came in contact with knife; operation otherwise normal. Eye not opened till fourth day, when some discomfort. Cut not evenly united, gaping at upper part, but anterior chamber existing. Cut was in good apposition at close of operation. Four days later wound closing slowly; a few days later sharp attack of catarrh in both eyes. Slight prolapse of iris at inner end of cut at time of discharge.	40 days.	V. $= \frac{2}{60}$
19	F.	66	Am.	Good.	Nucleus brownish yellow; periphery clear.	Functional examination good. T. less than normal	Dec. 12, 1877.	Græfe up. No ether. Cut and iridectomy normal. On attempt to divide capsule, fluid vitreous came in considerable amount with great collapse of globe, and lens sunk, and operation abandoned. Wound healed kindly.	12 days.	V. $= \frac{2}{36}$

No.	Sex	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
20	M.	53	Am.	Poor. Certain amount of general paralysis.	Hard. Senile. 1 year.	Functional examination fair. Other eye shows post-polar cataract.	Dec. 28, 1877.	Græfe up. Ether. Operation normal. Some capsule left in pupil. Jan. 24, 1878, secondary operation: capsule divided.	20 days.	V. = $\frac{2}{36}$ Second operation a month later. $\frac{3}{36}$
21	M.	65	Irish.	Fair.	Senile.	Functional examination good. Cornea small; pupil dilates moderately.	Jan 1, 1878.	Græfe up. No ether. Patient restless, bringing cut more into cornea than usual.	16 days.	V. = $\frac{6}{60}$ Later, $\frac{6}{36}$
22	M.	68	Am.	Poor.	Morgagnian. 6 years.	Functional examination good.	Jan. 3, 1878.	Græfe up Ether. Lens and capsule came out together without difficulty. Operation in other respects normal. Capsule thickened; contents semi-fluid. Healing normal.	14 days.	V. = $\frac{6}{18}$
23	M.	35	Am.	Fair.	1 year.	Functional examination good. Cornea small, pupil of medium dilatability.	Jan. 3, 1878.	Græfe. Ether. Cut small.	19 days.	V. = $\frac{6}{18}$

24	M.	53	Am.	Fair.	1 year.	Functional examination good. Cornea small.	Jan. 10, 1878.	Græfe. Ether. Cut small; lens sticky, requiring considerable force to extract; operation otherwise normal; healing normal.	19 days.	V. = $\frac{6}{18}$
25	M.	63	Am.	Good.	Hard. Senile.	Functional examination good.	Jan. 2, 1878.	Græfe up. No ether. Patient contracted orbicularis strongly against speculum, causing considerable loss of vitreous. Cut healed with slight prolapse of iris at inner corner. Feb. 16, 1878, second operation: prolapse removed and capsule torn across.	24 days.	V. = $\frac{4}{60}$ Second operation a month later gave $\frac{3}{36}$ In August following, $\frac{6}{24}$
26	M.	68	Irish.	Fair.	Hard Senile.	Functional examination good. Pupil of medium dilatability. Cornea small.	Jan. 26, 1878.	Græfe. Ether. Cut small, but operation normal. Some blood left in ant. chamber which was slow of absorption. Slight iritis.	33 days.	V. = $\frac{6}{18}$
27	M.	63	Irish.	Good.	Hard hypermature 7 years.	Functional examination good. Cornea small. Pupil dilates medium amount.	Feb. 7, 1878.	Græfe. Ether. Vitreous presented before completion of cut. Good iridectomy; lens removed by scoop, without incising capsule; loss of vitreous moderate; wound left in good apposition; healed well.	20 days.	V. = $\frac{3}{36}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæthesia. Remarks.	Length of Treatment.	Result.
28	F.	67	Am.	Fair.	1 year.	Functional examination good Cornea and pupil small. Eye deep set.	Feb. 14, 1878.	Græfe. Ether. Deeply set eyes made iridectomy difficult. Large nucleus removed, leaving clear pupil. Patient, during convalescence, restless and partly delirious, but healing normal.	15 days.	V. = $\frac{6}{24}$ a month later, $\frac{6}{18}$
29	M.	73	Eng.	Feeble.	Hard. Senile.	Functional examination not satisfactory. Pupil dilates to $\frac{2}{3}$.	Feb. 22, 1878.	Græfe up. Ether. Operation normal, except that at close, a point of vitreous appeared in wound, but did not escape. Nucleus large; centre of pupil clear; some capsule at sides. Patient very feeble and reacted slowly after ether. Cut healed well, but inflammation followed, closing pupil. To return for secondary operation.	24 days.	Counts fingers at 10c. Five months later, V. = $\frac{2}{36}$ 4 mos. later, $\frac{5}{36}$
30	F.	61	Am.	Poor. Organic disease of heart and chronic pleurisy.	Senile.	Functional examination good. Cornea and pupil small.	Feb 28, 1878.	Græfe. Ether. Cut small; completed in cornea. Operation passed off well, but followed by iritis.	30 days.	Counts fingers at 0.5. 9 w'ks later, V. = $\frac{6}{60}$

31	F.	72	Am.	Fair.	Hard, in period of swelling.	Functional examination good. Cornea 11.5 m. m. Pupil medium. Other eye lost by irido choroiditis.	Mar. 9, 1878.	Græfe up. No ether; eserine instilled. Much soft cortical, also bleeding. Patient saw hand after operation, but could not count fingers. Secondary operation, May 4, 1878; cut made through membrane with Wecker's scissors, but iris retreated before scissors, and could not be cut. Some vitreous lost.	18 days.	Counts fingers at two metres with difficulty.
32	F.	73	Irish.	Fair. Patient childish.	Hard. Mature. 5 years.	Functional examination good. Corneal diameter, 12 m m.	Mar. 10, 1878.	Græfe up. Ether; eserine instilled. Much bleeding; large hard lens. During convalescence, patient restless and troublesome from dementia.	17 days.	V. = $\frac{6}{36}$
33	M.	55	Irish.	Fair.	Senile. Mature. 3 years.	Functional examination good. Cornea 12 m m. Pupil small.	Mar. 13, 1878.	Græfe up. No ether; esérine instilled. Cut small; lens had to be forced out. Fingers distinguished after operation. Eight days after, some chemosis; this increased on tenth day, but no pain. Some cortical in pupil, some thickened capsule.	24 days.	V. = $\frac{6}{36}$
34	F.	55	Irish.	Good.	Hard nucleus, soft cortical. 1 year.	Functional examination good. Cornea 11 m m.	Mar. 21, 1878.	Græfe up. No ether; eserine instilled. Good vision after operation. Large patch of capsule in pupil at time of discharge. To return for secondary operation.	18 days.	V. = $\frac{3}{24}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
35	F.	70	Am.	Good, but patient rather feeble.	3 years.	Functional examination good. Cornea 12 m m. Pupil medium.	Mar. 22, 1878.	Græfe. Ether. Operation and healing normal.	20 days	V. = $\frac{6}{18}$
36	M.	55	Irish.	Good.	2 years.	Functional examination good. Cornea 12 m m. Pupil $\frac{2}{3}$.	Mar. 29, 1878.	Græfe up. Ether. Good section. On completion of iridectomy, bead of vitreous appeared, though no undue pressure; lens removed with slight difficulty by scoop. Eye quiet 48 hours, then considerable chemosis and inflammatory reaction, which gradually disappeared. At time of discharge eye quiet, cortical absorbing capsule in pupil. To return for secondary operation.	63 days.	V. = $\frac{2}{36}$
37	M.	77	Nova Scotia.	Fair.	Hard. Mature. 12 years.	Functional examination good. Cornea 11 m m. Pupil medium.	Mar. 31, 1878.	Græfe up. No ether; eserine instilled. Cut of good size; hemorrhage profuse; lens came with difficulty; piece of thick capsule afterwards removed with Daviels spoon. Eye opened on eighth day for first time; slight redness; capsule in pupil, but clear opening at centre, though very small.	15 days.	V. = $\frac{6}{24}$ 7 mos. later, $\frac{6}{9}$

38	M.	72	Am.	Good.	3 years. Eye struck by a piece of wood 3 years ago.	Projection upwards doubtful Cornea 12.5 m m. Pupil large.	Apr 6, 1878.	Græfe up. No ether; eserine instilled. Much dense capsule left in pupil. Patient counted fingers after operation. Some pain the same night; no swelling or discharge. Eyes opened seven days later; much cortical in pupil.	13 days.	V. = $\frac{2}{60}$ 6 w'ks later, $\frac{6}{36}$
39	F.	72	Irish.	Good.	2 years.	Functional examination good. Corneal diameter 11.5 m m. Pupil small.	Apr. 10, 1878.	Græfe up. No ether; eserine instilled. Much bleeding after iridectomy; gush of vitreous on withdrawal of cystitome; profuse hemorrhage continued, but scoop introduced three times, the third time bringing away a large lens in its capsule; some vitreous lost. During the next four days patient very restless, pulling off bandage repeatedly; complained much of pain, though no swelling of lids. Acute mania supervened; refused nourishment, and two days later sent to the asylum.	6 days.	V. = $\frac{6}{24}$
40	M.	78	Am.	Good.	Hard. Senile. 2 years.	Functional examination good. Cornea 11.5 m m.	Apr 12, 1878.	Græfe up. Ether. Lens a little tremulous when touched, but came away cleanly, leaving a clear pupil. Iritis followed, of a low type, but persistent. Pupil a good deal obstructed at time of discharge, but showing a very small, clear opening. To return for secondary operation. Oct. 19, 1878, membrane in pupil divided by Wecker's scissors.	44 days	V. = $\frac{3}{60}$ 2 w'ks later, $\frac{3}{36}$ Second operation 4 mos. later, $\frac{3}{18}$

No.	Sex.	Age	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
41	M.	77	Am.	Poor. Heart trouble.	Hard. 2 years.	Functional examination good. Cornea 12 m m. Pupil very small.	Apr. 14, 1878.	Græfe up. Ether; eserine instilled. Operation normal; pupil drawn up in healing; capsule left in pupil. To return for secondary operation. Oct. 18, 1878, iris and membrane divided by Wecker's scissors and bent broad needle.	13 days	V. = $\frac{8}{60}$ Second operation, 6 mos. later, $\frac{6}{36}$
42	F.	60	Irish.	Good, but suffers from rheumatism.	1 year.	Functional examination good. Cornea 11.5 m m. Pupil small.	Apr 17, 1878.	Græfe up. No ether; eserine instilled. Apex of cut a trifle below edge of cornea.	13 days.	V. = $\frac{6}{12}$
43	M.	74	Irish.	Good.	6 years.	Functional examination good. Cornea 11.5 m m.	Apr. 19, 1878.	Græfe up. Ether. Operation followed by mild iritis, leaving membrane in pupil. To return for secondary operation.	40 days.	V. = $\frac{8}{60}$
44	M.	72	Am.	Good.	Morgagnian 2 years. Blow from a piece of wood.	Functional examination good. Cornea 12.5 m m. Pupil large.	Apr. 19, 1878.	Græfe up. No ether; eserine instilled. On opening capsule, fluid cortical escaped. Nucleus removed by scoop.	15 days.	V. = $\frac{6}{36}$
45	F.	60	Irish.	Good, but suffers from rheumatism.	2 years.	Functional examination good. Cornea 11.5 m m. Pupil small.	May 1, 1878.	Græfe up. No ether; eserine instilled A little capsule left in pupil. Capsulitis ensued, attributed to blow upon eye caused by striking it against edge of table.	15 days.	Counts fingers at one metre.

46	M.	60	Irish.	Good.	Senile. 3 years.	Functional examination good. Corneal diameter 12 m m. Pupil large.	May 2, 1878.	Græfe up. No ether; eserine instilled. Lens large: much bleeding; pupil left clear, but patient could not count fingers. At time of discharge, thin film covering pupil	15 days.	V. = $\frac{3}{24}$ 6 mos. later, $\frac{6}{12}$
47	M.	60	Am.	Good.		Projection upper and lower third imperfect. Cornea, 11.5 m m.	May 11, 1878.	Græfe up. Ether. eserine instilled. Large amount of sticky cortical removed; pupil left apparently clear. During healing, remnant of cortical appeared in pupil. Mild iritis.	25 days.	V. = $\frac{6}{24}$
48	F.	60	Irish.	Good.	Senile. 1 year.	Functional examination good. Cornea 12 m m.	May 14, 1878.	Græfe up. Ether. During convalescence, patient very restless and pulled off bandage, causing slight hernia of iris at outer angle of wound. Some capsule in pupil at time of discharge.	18 days.	V. = $\frac{6}{60}$ 2 mos. later, $\frac{6}{36}$ 3 mos. later, $\frac{6}{24}$
49	M.	60	Am.	Good.	Hard. Senile. 2 years.	Functional examination good. Cornea 12 m m. Pupil medium.	May 19, 1878.	Græfe up. No ether; eserine instilled. Some capsule in pupil at time of discharge.	11 days.	V = $\frac{4}{60}$ 5 w'ks later, $\frac{6}{36}$
50	F.	63	Irish.	Good.	2 years.	Functional examination good Cornea 12 m m Pupil large.	May 26, 1878.	Græfe up. No ether; eserine instilled. Some iritis followed, requiring leeches and atropine.	18 days.	V. = $\frac{6}{18}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthêsia. Remarks.	Length of Treatment.	Result.
51	M.	63	Am.	Good.	1 year.	Functional examination good. Cornea 12 m m. Pupil small, eye deep-set	June 4, 1878.	Græfe up. Ether. Operation rendered difficult by eye being deep-set; nucleus sticky; convalescence retarded by blow on eye. Some capsule in pupil at time of discharge.	29 days.	V. = $\frac{6}{36}$
52	M.	63	Scotch.	Good.	3 years.	Functional examination good. Cornea 11.5 m m. Pupil large.	June 4, 1878.	Græfe up. Ether Cut rather small. Considerable pressure required to dislodge lens.	13 days.	V. = $\frac{6}{24}$ 5 mos. later, $\frac{6}{6}$
53	F.	35	Irish.	Very poor.	2 years.	Functional examination good. Cornea 11.5 m m. Pupil small.	June 6, 1878.	Græfe up. Ether. Small nucleus; great deal of corticalis moved. Iritis followed	37 days.	V. = $\frac{6}{36}$ 18 days later, $\frac{6}{18}$
54	F.	61	Irish.	Fair.	Senile.	Functional examination good. Cornea 11.5 m m.	June 12, 1878.	Græfe up. No ether. Iridectomy not quite satisfactory, owing to patient's restlessness. Prolapse of iris removed two weeks later.	32 days.	V. = $\frac{3}{9}$
55	F.	61	Irish.	Fair.	Senile.	Functional examination good Cornea 11 5 m m.	June 27, 1878.	Græfe up. No ether.	17 days.	V. = $\frac{3}{18}$

56	F.	64	Irish.	Good.	Hard. Senile. 9 months.	Functional examination good. Cornea 11.5 m m. Post synechia.	July 30, 1878.	Græfe up. No ether. Owing to the post synechia lens removed by scoop; moderate loss of vitreous; pupil drawn up in healing. Secondary operation, September 11: canula scissors. September 24, patient eloped.	54 days	Perception of light. Second operation gave $\frac{4}{60}$
57	M.	70	Am.		Senile.	Functional examination good.	Aug. 2, 1878.	Græfe up. No ether. Cut small; had to be enlarged.	29 days.	V. $= \frac{3}{60}$ 4 w'ks later, $\frac{6}{60}$
58	M.	66	Irish.	Good.	Hard. 3 years.	Functional examination good. Cornea 11.5 m m.	Aug. 3, 1878.	Græfe up. Ether.	21 days.	V. $= \frac{6}{18}$
59	M	48	Am.	Good.	Hard Post polar, but slight reflex through clearer portion, and slight improvement under atropine.	Functional examination good.	Aug. 12, 1878.	Græfe up. Ether. Lens came out clean, leaving but little cortical.	16 days.	V. $= \frac{6}{36}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
60	F.	72	Am.	Good.	Hard. 15 years.	Projection up and in deficient. Cornea 12 m m.	Aug. 22, 1878.	Græfe up. No ether; eserine. Scoop used and afterwards forceps; extracted nucleus and capsule. No vitreous lost or appeared in wound. Patient counted fingers after operation. Eye opened on eighth day; cut not united at centre; bandage reapplied. Six days later, cut had not united; vitreous somewhat in wound; this was pricked with a needle three days in succession Four days later wound was healed with ant. synechia.	30 days.	V. $= \frac{6}{24}$
61	M	48	Am.	Good.	Hard. Post polar.	Functional examination good. Clearer portion of lens gave but slight reflex.	Aug. 28, 1878.	Græfe up. Ether. Vitreous presented and lens removed by scoop. Moderate loss of vitreous. Eye opened on the eighth day, cut well healed. Iritis; dense membrane in pupil at time of discharge.	35 days.	Perception of light.
62	F.	66	Am.		4 years.	Functional examination good. Cornea 11 5 m m. Post synechia.	Sept 13, 1878.	Græfe up. Ether. Iris found adhered to lens, vitreous coming on pressure; scoop used, bringing away two thirds of lens substance: cortical absorbing rapidly at time of discharge.	12 days.	Perception of light.

63	M.	67	Am.	Fair.	2 years.	Functional examination good. Cornea 11 m m.	Sept. 13, 1878.	Græfe up. Ether. Much bleeding; large iridectomy; large nucleus, came readily.	10 days.	V. = $\frac{3}{24}$ 17 days later, $\frac{6}{24}$
64	M.	65	Irish.	Good.	1 year.	Functional examination good. Cornea 11.5 m m.	Sept. 16, 1878.	Græfe up. Ether. Small iridectomy, capsule opened at periphery; only lens came out easily and cleanly. A solution of thymol used to bathe eye before and after operation, and instruments kept in it till used.	26 days.	V. = $\frac{6}{18}$
65	F.	60	Am.			Failure of projection upwards. Eye presented small iridectomy; done for old iritis. Cornea 12 m m.	Sept. 20, 1878.	Græfe up. Ether. After making cut, the iris, which presented a small iridectomy, was divided, partly by Wecker's scissors and partly by straight needle to within about 2 m m. of its lower edge; lens was then extracted with some difficulty, owing to insufficient opening A large mass of opaque capsule with whitish spots remaining in pupil, it was seized by forceps and drawn out, leaving pupil clear. Solution of thymol used as in case above.	14 days.	Counts fingers at four feet.
66	F.	70	Am.	Good.	8 years.	Partial failure of field upwards. Cornea 11.5 m m.	Sept 20, 1878.	Græfe up. Ether. Vitreous presented; scoop used and lens nearly all removed. Cortical absorbing at time of discharge.	15 days.	Counts fingers. 2 mos. later, V. = $\frac{6}{24}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
67	M.	81	Am.	Good.	Hard. 6 years.	Functional examination good. Cornea 12 m m. Pupil dilates well.	Sept. 24,1874.	Græfe up. Ether. Large lens came away readily; pupil left clear. No pain or uneasiness followed, but on examination, two days later, no ant. chamber. Increased pressure with bandage, and quinine ordered; two days later, chamber restored. Cornea cloudy several days after operation.	12 days.	V = $\frac{3}{18}$ 2 w'ks later, $\frac{6}{18}$
68	M.	65	Irish.	Good.	6 months.	Functional examination good. Cornea 11.5 m m.	Sept. 30,1878	Græfe up. Ether. Eye healed well. Solution of thymol used as in cases No. 64 and 65, and eye dressed with thymol gauze covered by bandage.	12 days.	V. = $\frac{6}{36}$

1	M.	28	Irish.	Good.	Traumatic. Soft. 18 days. Eye struck by a bush.	Functional examination good. Pupil large.	Dec. 8, 1877.	Suction. Ether.	6 days.	V. = $\frac{6}{18}$ a month later $\frac{6}{9}$
2	M.	48	Irish.	Fair.	Traumatic. 3 months. Eye punctured by a fork.	Functional examination good. A large corneal cicatrix with ant. synechia, lens pressing into anterior chamber.	Dec. 11, 1877.	Suction. No ether.	7 days.	V. = $\frac{4}{60}$ a month later $\frac{6}{36}$
3	M.	35	Irish.	Fair.	Traumatic. Soft. Eye cut by a piece of iron.	Functional examination good. Eye painful. Cut through cornea and iris; some pus behind iris.	Jan. 10, 1878.	Suction. No ether. Secondary operation, March 1, 1878; obstruction in pupil divided by sharp hooks.	8 days.	Counts fingers at one metre. 6 weeks later second operation gave $\frac{6}{9}$
4	F.	27	Irish.	Poor, anæmic and feeble.	Soft. 3 months.	Functional examination good.	Jan. 14, 1878.	Suction. Ether. Clear black pupil left after operation. Patient up and about next day. January 23, examination showed vitreous hazy, fundus seen dimly, and details could not be made out. Patient feeble and anæmic.	10 days.	V. = $\frac{6}{18}$

No.	Sex.	Age.	Nationality.	Health.	Quality and Duration of Cataract.	Condition of Eye.	Date.	Operation. Anæsthesia. Remarks.	Length of Treatment.	Result.
5	F.	11	Am.	Poor.	Soft. 4 months.	Functional examination good. Cornea 11 m m.	Mar. 19, 1878.	Suction. Ether. Instrument bruised wound somewhat, which had to be enlarged. Operation followed by suppurating condition of wound and acute iritis. Patient very feeble and unable to retain solid food. A blow on eye six weeks later caused continued hemorrhage.	58 days.	Perception of light.
6	M.	43	Am.	Good.	Traumatic. Soft. 3 mos. Eye struck by a piece of wood.		June 2, 1878.	Suction. Ether.	6 days.	V. = $\frac{6}{12}$
7	F.	31	Am.	Good.	Traumatic. 6 w'ks. Eye struck by thumb-nail.	Functional examination good. Cornea 11 m m. Pupil fair size.	June 6, 1878.	Suction. Ether.	12 days.	V. = $\frac{6}{36}$
8	F.	40	Irish.	Good.	Soft. 2 years.	Functional examination good. Cornea 11 m m.	June 11, 1878.	Suction. No ether.	7 days.	V. = $\frac{6}{36}$

FIFTY-FOURTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1879.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
34 School Street.

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OF THE

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1879-80.

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REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1879.

In behalf of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the report of the surgeons for the year ending Sept. 30, 1879.

The past year presents no new features and calls for no special notice. The report gives the record of a large number of individual cases treated at the Infirmary, and the consequent return of many persons to the body of active and industrious members of the community.

The surgeons, in rendering this annual account, note that the number of patients treated has not increased in the ordinary ratio. This would be a matter of congratulation if it showed that we had reached the maximum of cases requiring treatment with the present population of the State; they, however, do not attribute the small increase to this cause, but to the want of proper and convenient accommodations, — in fact, to our having reached the extreme limit of our capacity for usefulness.

This question has pressed with more and more weight each year upon the Board, and finally they have appealed to the generosity of the public to furnish them with the means of enlarging the present building and of taking care, in a satis-

factory manner, of the large number of patients who crowd the Infirmary and overtax the surgeons.

This appeal has, thus far, only met with a moderate response; but the Board is not without hope that the return of more prosperous times will give to many the ability and inclination to contribute to their needs.

It is also hoped that the Commonwealth may assist in this, since there are few charities of a more unquestioned advantage to the community at large. The Legislature has, up to this time, responded generously to the annual request for assistance, and will probably continue to do so; but it seems unquestionable that the time has arrived when it is good policy to place the institution on a firm basis, which will render the question of meeting each year's expenditure less a matter of doubt than at present.

The Board has to report a legacy from the estate of Henrietta Lain, of Lunenburg, a portion of which will probably soon become available.

The contributions from private sources towards a fund for the erection of a wing to the present building and an increase of the invested principal of the Infirmary amount to $8,695. This sum, however, is not as yet sufficiently large to warrant a commencement of the building, though the time has been exceptionally favorable.

The income derived from dividends and interest during the year amounted to the net sum of .	$5,158 15
Contribution of the Commonwealth . . .	9,000 00
Board of patients	1,157 50
Total available income	$15,315 65
The expenses have been	15,154 72
Balance	$160 93

For the first time for some years the income derived from these sources has been sufficient to meet the expenditure. This result has only been reached by the exercise of the most rigid economy joined to an increase of the amount voted by the Legislature.

The number of out and house patients treated during the past year has been 9,559, being an increase of 94 over the previous year.

The well-earned reputation for efficiency and skilful treatment of cases at the Infirmary has been fully maintained during the year, and it is believed that the report will compare favorably with the returns of kindred institutions in other States.

FRANKLIN H. STORY.
HARVEY JEWELL.
THOMAS B. CURTIS.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen, — The surgeons of the Infirmary would hereby present their report for the year ending Sept. 30, 1879.

The total number of patients has been 9,559, against 9,465 of the previous year. This does not give our usual average increase. One of the probable reasons was the lack of employment, by which many were deprived of the means of reaching our institution. It may also well be that the present impossibility of attending to our patients as we would desire, from want of proper rooms and appliances, may have contributed towards the lessened increase in the total number of patients.

Could our community see and realize under what disadvantage to both patient and surgeon the charitable work of the Infirmary is done at present, the recent appeal from your Board could not long remain unanswered. With sufficient rooms and proper appliances the time at present given by the surgeons could include the treatment of many more who would then seek our aid.

We can but again call your attention to the pressing wants and necessities of our institution, and add our appeal to yours for relief from the community that the results of our work fairly entitle us to receive.

Lack of space and proper appliances cause our best efforts to appear at times most discouraging. Our purpose is not only to simply treat the poor who apply to us, but to so treat

and take care of them as will induce their return when again needing our help, and cause others to come under similar circumstances. Not only do we endeavor to restore sight and hearing, but we desire to induce patients to allow themselves to be properly treated, that they may not become a future burden to their relatives or the community.

Appended are the statistical statements of the eye and ear patients and diseases, and an analysis of the cases of cataract operations.

We would hereby acknowledge the valuable aid in our work from the assistant surgeons, as also from the interne, ophthalmic and aural externe, and the superintendent.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1878, to October 1, 1879.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	294
Females	210
	505

Out-Patients.

Whole number of eye patients	6,464
Whole number of ear patients	2,590
Total eye and ear patients	9,054
Residents of Boston	5,612
" other parts of Massachusetts	3,107
" Maine	111
" New Hampshire	112
" Vermont	35
" Rhode Island	18
" Connecticut	8
" other States	25
" British Provinces and foreign countries	20
Unrecorded	6
	9,054

Eye patients: —		
Males	3,400	
Females	3,064	
		6,464
Ear patients: —		
Males	1,372	
Females	1,218	
		2,590
		9,054

Occupations of Eye Patients.

Housekeepers	1,058
Children	1,341
Infants	230
Teachers	46
Students	50
Clerks	310
Mill operatives	85
Seamstresses	287
Domestics	768
Laborers	850
Mariners	76
Machinists	227
Stonecutters	191
Shoemakers	145
Printers	60
Tailors	36
Other mechanics	704
	6,464

Occupations of Ear Patients.

Agents	4
Barbers	5
Coachmen	2
Collectors	2
Children	460
Conductors	4

Clergymen	4
Carpenters	59
Clerks	111
Dentist	1
Designer	1
Domestics	121
Drivers	9
Engineers	3
Errand boys	12
Farmers	38
Home	628
Infants	140
Laborers	365
Laundry	9
Mariners	36
Mechanics	160
Musicians	8
Milliners	6
Merchants	46
Mill-hands	75
Nurses	12
Painters	12
Printers	12
Seamstresses	110
Students	8
Superintendent	1
Teachers	15
Tailors	18
Teamsters	28
Waiters	13
Watchmen	7
Others	4
Unrecorded	20
	2,590

Diseases of the Eye.

Lids.

Erysipelas	6
Eczema	29
Abscess	35
Blepharadenitis	448
Lippitudo	3
Hordeolum	43
Chalazion	107
Cyst	11
Ectropia	12
Entropia	14
Trichiasis	34
Ptosis	9
Anchyloblepharon	3
Symblepharon	1
Œdema	25
Epithelioma	2
Verruca	7
Tumor	10
Blepharitis	8
Lupus	1
	809

Conjunctiva.

Conjunctivitis catarrhal	1,266
" blenorrhoic	22
" " neonatorum	27
" granular, with pannus	53
" phlyctenular	188
" traumatic	27
" granular	150

Conjunctivitis, diphtheritic	4
Fungous granulations on conjunctiva	1
Chemosis	10
Ecchymosis	27
Pterygium	39
Pinguecula	8
Ophthalmia, gonorrhœal	4
Herpes zoster ophthalmicus	6
Foreign body on conjunctiva	30
Epithelioma	6
	1,868

Cornea and Sclera.

Keratitis	151
" interstitial	11
" traumatic	22
Kerato iritis	15
Abscess of cornea	4
Ulcer of cornea	419
" " vascular	18
" " traumatic	26
Leucoma	159
Rupture of cornea	9
Staphylona anterior	16
Conical cornea	6
Hypopion	11
Arcus senilis	1
Abrasion of cornea	20
Foreign body on cornea	358
" " sclera	6
Sclero-keratitis	9
Episcleritis	8
Scleritis	20
	1,289

Iris and Ciliary Body.

Iritis	143
" syphilitic	25
" rheumatic	3
" traumatic	11
Prolapse of iris	4
Iridodonesis	5
Coloboma of iris	4
Mydriasis	20
Posterior synechiæ	31
Anterior "	19
Ciliary injection	8
Dialysis of iris	1
Myosis	1
	275

Choroid.

Choroiditis	94
Sclerotico-choroiditis posterior	48
Indo-choroiditis	9
Glaucoma	21
Rupture choroid	1
Retino choroiditis	4
	177

Retina.

Retinitis pigmentosa	3
Retinitis	5
" apoplectica	4
Separation of retina	17
Neuro retinitis	9
Albuminuria	3
	41

Optic Nerve.

Neuritis	11
Atrophy	53
Embolism of central artery	1
	65

Vitreous.

Opacities	21
Hemorrhage	2
	23

Lens.

Cataract, hard and soft	136
" incipient	74
" congenital	14
" traumatic	49
" capsular	3
" lamellar	4
" posterior polar	22
Dislocation of lens	12
Aphakia	2
Cyclitis	8
	324

Lesions of Globe.

Hydropthalmus	3
Phthisis bulbi	59
Exophthalmus	1
Rupture of globe	15
Exostosis of brow	2
Microphthalmus	1
Tumor of globe	5
Tumor of orbit	6
	92

Affections of Percipient Apparatus.

Amblyopia	66
Hemeralopia	4
Amblyopia ex abusu	6
Muscæ volitantes	19
Scotoma	3
	111

Refraction and Accommodation.

Myopia	143
Hypermetropia	333
Astigmatism	148
Presbyopia	46
Asthenopia	120
	790

Muscular Affections and Neuroses.

Paralysis of third pair	10
" fifth "	1
" sixth "	7
" accommodation	8
Diplopia	12
Strabismus convergens	123
" divergens	18
Ciliary neuralgia	8
Neuralgia fifth pair	1
Insufficiency of internal recti	1
Blepharospasmus	11
Nystagmus	8
Ciliary spasm	4
	212

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	189
Abscess of lachrymal sac	41
Lachrymal fistula	3
	233

General Injuries.

Blows and cuts	93
Burns	25
Unfit	234
Unrecorded	155
	507

Recapitulation of Diseases of the Eye.

Lids	808
Conjunctiva	1,868
Cornea and sclera	1,289
Iris and ciliary body	275
Choroid	177
Retina	41
Optic nerve	65
Vitreous	23
Lens	324
Lesions of globe	92
Percipient apparatus	111
Refraction and accommodation	790
Muscular affections and neuroses	212
Lachrymal apparatus	233
General injuries	118
Unfit and unrecorded	389
	6,815

Operations on the Eye.

Cataract.

Extraction, method of Græfe, cataract	83
Modified linear	1
Discission	1
Suction	20
	105

Iridectomy.

Wecker's operation for closed pupil	3
For artificial pupil	15
" lamellar cataract	3
" chronic iritis with closed pupil	5
" removal of foreign body	1
" glaucoma	6
Anterior synechia	2
Irido-choroiditis	1
	36

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened,	12
" disorganized eye	13
" phthisis bulbi	4
" anterior staphyloma	2
" foreign body in globe	6
	37

Other Operations.

Saemisch operation for ulcer of cornea	3
Tattooing cornea	1
Noyes's double hook operation	4
Agnew's hook operation	10
Division of capsule	8
Passavant's operation for posterior synechia	2
Foreign body in globe	1
" " in cornea	5
Paracentesis cornea	4
Peritomy	10
Excision of anterior staphyloma	3
Neurotomy	2
Sclerotomy	3
Pterygium, Desmarres operation	15
	71

Pterygium, abscised	1
Strabismus convergens	65
" divergens	3
Entropion	4
Trichiasis, Snelling's operation	5
" Streatfield's operation	14
" Arlt's operation	2
" removal of ciliary border	4
Bowman's operation for tear passages	2
Canthoplasty	6
Chalazion	29
Cyst of lids	5
Plastic of lids	2
Tumor of orbit and globe	3
Tumor cornea and sclera	1
Epithelioma of lids and conjunctiva	1
Necrosed bone of orbit	4
Miscellaneous	6
	157
Total	406

STATISTICAL REPORT OF DISEASES OF THE EAR.

Oct. 1, 1878, to Oct. 1, 1879.

CLASSIFICATION.

Abscess of auricle and meatus	14
Eczema	31
Otalgia	6
Obstructure of meatus from cerumen	442
Foreign bodies in meatus	9
Otitis externa circumscripta	50
" " diffusa	58
Rupture of membrana tympani	2
Perforation " "	6
Otitis media purulenta	673
" " " with abscess of mastoid	18
" " " " polypi	50
" " catarrhalis chronica	622
" " " acuta	213
" " " sub-acuta	98
" " " serosa	2
" " " tubalis	22
" interna s. labrinthica	26
Tinnitus aurum, associated with cerebral disease	36
Otalgia neuralgica	20
Deaf-mutism	5

Fissure of lobe	1
Unfit	102
Unrecorded	21
Exostosis of meatus	2
Furuncle, meatus	7
Aspergillus	2
Nævus	1
Myringitis	2
Ulcer membrana tympani	1
Pemphigus	1
Other diseases	35
	2,590

STATISTICS OF ONE HUNDRED AND FIVE OPERATIONS FOR CATARACT.

COMPILED BY DR. B JOY JEFFRIES.

One hundred and five cases of cataract have been operated on during the year ending Sept. 30, 1879. Eighty-two of these were done by Von Græfe's method, one by Liebreich's, twenty by the suction operation, one by the modified linear, and one by discission.

In nineteen of the Græfe operations ether was not given. Chloroform is never used as an anæsthetic in the Infirmary. In the other fifty-nine cases ether was administered. Thymol, in saturated solution, was used upon the eye and instruments in ten of the Græfe operations. Eserine was used in seventeen of the nineteen Græfe operations where ether was not given.

The resulting vision in the eighty-three Græfe operations is as follows: —

Vision $\frac{6}{6}$	1	Vision $\frac{4}{60}$	1
" $\frac{6}{9}$	3	" $\frac{1}{18}$	1
" $\frac{6}{12}$	6	" $\frac{3}{60}$	1
" $\frac{6}{18}$	18	" $\frac{1}{60}$	1
" $\frac{6}{24}$	14	Counts fingers at one metre	5
" $\frac{4}{24}$	1	Perception of light	6
" $\frac{6}{36}$	16	No resulting vision	2
" $\frac{6}{60}$	7		—
			83

Resulting vision in Liebreich's operation: —

Counts fingers at one metre	1

Resulting vision recorded in the suction cases: —

Vision $\frac{6}{6}$	3	Counts fingers	3
" $\frac{6}{12}$	1	Sees motion of the hand	1
" $\frac{6}{18}$	3	Perception of light	2
" $\frac{6}{24}$	1	No record	4
" $\frac{6}{36}$	1		—
" $\frac{2}{36}$	1		20

Resulting vision in modified linear operation: —

Vision $\frac{6}{18}$	1

The lists give but a rough estimate of the amount of vision gained by the operations for the patients, and this for many reasons. The Infirmary year ends Sept. 30, and those operated on in August or September have to be recorded with the others in the annual report. Their subsequent improvement cannot be noted. The correction of astigmatism is not very often possible, as so many patients are too little educated to give intelligent answers. Many cannot read, and their vision is recorded low from inability to decide it with precision, though the opthalmoscope may show a clear pupil and normal fundus.

A second record showed increased vision even after but from one to six months subsequent to the patient's leaving the Infirmary. Unless a second test of vision is obtained, the first, which many of the records are, is hardly a fair criterion, since it has frequently to be taken under great disadvantages. The patient has not come fully to the light, is dazed by the test, excited by the prospect of good vision, or despondent at not being able to read at once. Sometimes but a few moments can be taken, whilst friends are waiting to carry the patient home. It certainly has been found that, where a good test could be made under favorable circumstances, astigmatism corrected, etc., even but a short

time after the first one, the vision has been found too much above the previous record to be explained by lapse of time alone. To answer why a thorough test cannot always be made, it should be said that the present conditions of the surgeon's work at the Infirmary, independent of themselves, frequently prevents it. The institution cannot retain cataract patients longer than is absolutely necessary for them to stay to render travelling home safe for the eye operated on.

Of the Græfe cases resulting below what is considered a success, nine come under the head of a *moderate success* and five are to have secondary operations, which may carry them finally into the class of *success*.

No. 1 had iridocyclitis and erysipelas of lips a few days after the operation.

No. 5 counts fingers at one metre, but has "cloudy cornea from its ulceration."

No. 9 counts fingers at one foot. To be operated on again.

No. 13. V. = $\frac{4}{60}$. There was "doubtful projection" downward before operation. Patient removed bandage. When replaced she had vomiting, which forced open the wound.

No. 29. "Projection not perfect" reported before operation. Vitreous fluid and scoop required. Patient restless during convalescence. Secondary operation.

No. 30. "Counts fingers, doing well," is reported as resulting vision on the fifth day, when patient insisted on leaving, having had some cardiac attack. Though thus necessarily classed as to vision, there is no proof that they did not do well.

No. 37. Iritis. Vitreous obstructed. Suspicion of a growth behind the cataract was excited but not determined.

No. 39. V. = $\frac{3}{60}$. Mild iritis. A secondary operation is needed.

No. 40. "Partial failure of projection upwards. Catarrh." Scoop required. Iritis. Patient has perception of light. Secondary operation possible.

No. 52. V. = $\frac{1}{60}$. "Failure of projection upwards. Globe hard. Doubt as to intraocular trouble." Wound closed slowly, with blood in anterior chamber and some keratitis.

No. 63. V. = $\frac{1}{18}$. Much bleeding. Fluid vitreous lost. Subsequent pain. Patient eloped tenth day; returned, but again eloped.

No. 61. "Perception of light." Operation was once refused on account of old chronic conjunctivitis. This caused great bleeding and chemosis with iritis.

No. 69. Counts fingers at M. 50. There was failure of projection, and old choroiditis in other eye. Vitreous lost. Patient had general paralysis. Acute catarrh. Fell down stairs seventh day.

No. 72. "Fingers at one metre." Floating opacities in vitreous.

No. 75. "Perception of light." Iritis. Closed pupil, to be opened hereafter.

No. 78. "Perception of light." Detachment of iris by accident.

No. 83. "Perception of light." Traumatic iritis. Pupil to be opened hereafter.

It must be remarked that the surgeons have no choice of material, and much is of an unpromising character. They consider themselves bound to give patients the chance of improvement, unless the indications are wholly against an operation.

STATISTICS OF CATARACT OPERATIONS PERFORMED AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY, FROM OCTOBER, 1878, TO OCTOBER, 1879.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	F. 72 Am.	Poor.	Senile. 2 years.	Doubtful projection upward; eye diverges.	Oct. 3, 1878. O S. Ether. Græfe up. Iris touched by knife; lens required considerable pressure; without pain; the blood did not clear nor the wound heal well; ant. chamber never wholly restored; cornea clouded; iridocyclitis. Four days after operation patient had erysipelas of lip.	31 days.	V. = 0.
2	F. 65 Irish.	Good.	2 years.	Normal.	Oct. 7, 1878. O. D. Ether. Græfe up. An attempt to remove some wrinkled capsule caused slight prolapse of vitreous.	14 days.	Nov 16, 1878. V. O. D. $= \frac{6}{24}$ c + D. 12.00
3	M. 77 Irish.	Good.	Senile. 1 year.	Normal.	Oct. 7, 1878. O. S. Ether. Græfe up. The iris not wholly divided by iridectomy; the bridge readily torn by cystitome. Thymol used on eye and instruments. Some opaque capsule at time of discharge to be removed later.	19 days.	April 24, 1879. V. O. S $= \frac{6}{24}$ c + D. 12.00
4	F. 66 Amer.	Good.	Senile. 3 years.	Normal.	Oct. 7, 1878. O. D. Ether. Græfe up. Thymol solution used on instruments but not on eye. Patient had diarrhœa and disturbed bandages, causing reopening of wound and iris to be caught in it.	25 days.	Nov. 19, 1878. V. O. S. $= \frac{6}{36}$ c + D. 8 00 c + D 14 00 S. 6.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
5	F. 48 Amer.	Good.	7 years.	Opacity mostly in post. part of lens; cornea cloudy from old ulceration.	Oct. 11, 1879 O D. Ether. Liebreich cut up. Prolapse of iris in wound. Thymol solution on eye and instruments. Iris prolapse not detached by pilocarpine and bandage, nor by subsequent atropine.	22 days.	Counts fingers at 1 m. c + D. 10.00
6	F. 72 Am	Good.	1½ years.	Normal.	Oct. 11, 1879. O S. No anæs. Græfe up. Peripheral opening of capsule only Thymol solution on eye which caused smarting, passing off in a few moments.	14 days.	V. O. S. c + D. 10.00 $\frac{6}{36}$ c + D 15.00 reads S. 2.
7	M. 81 Am.	Good.	Over-ripe.	Normal.	Oct. 12, 1878. O. S. Ether. Græfe up. Lens shrunken.	14 days.	Oct. 26, 1878. V. O. S = $\frac{6}{18}$ c + D. 12.00
8	F. 54 New Brunswick.	Fair.	Mature. 4 years.	Normal.	Oct 18, 1878. O. S. Ether. Græfe up. Considerable irritation and some exudation; kept under atropine; ophthalmoscope showed subsequently choroiditis as in other eye previously operated on.	16 days	Mar. 12, 1879. V. O. S. = $\frac{6}{18}$ c + D. 12.00
9	M. 70 Am.	Poor.	Mature. Hard. 5 years.	Normal.	Oct. 23, 1878. O. D. No anæsthesia. Græfe up. Thymol solution and dressing; traumatic iritis. Patient very restless; closure of all of pupil but small opening above.	42 days.	Dec 5, 1878 Counts fingers at 1 foot.

10	M. 77 Am.	Good.	Mature. 8 years.	Normal.	Oct. 24, 1878. O. S. No anæsthesia. Græfe up. Large cut; considerable hemorrhage, obscuring pupil; fourteenth day hemorrhage again into anterior chamber; some post. syn.	19 days.	Dec. 16, 1878. V. O. S = $\frac{6}{36}$ c + D. 10.00
11	M 60 Irish.	Good.	Mature. 1 year.	Normal.	Oct. 26, 1878. O D Ether. Græfe up. Thymol solution to eye and instruments.	18 days.	May 29, 1879. V. O. D. = $\frac{6}{18}$ c + D. 12 00
12	M. 67 Am.	Good.	Mature. 2 years.	Normal.	Oct. 28, 1878. O. S. Ether. Græfe up. Thymol solution to eye and instruments.	13 days.	Nov. 15, 1878. V. O. S. = $\frac{6}{24}$ c + D. 8.00 c + D 13.00 S. 2½.
13	F. 71 Am.	Poor.	Senile. 1½ years.	Doubtful projection downwards.	Nov. 8, 1878. O. S. Ether. Græfe up. Considerable cortical left rather than risk vitreous. Same evening patient got bandage loose. On replacing it, she had vomiting, forcing open the inner edge of wound. Ninth day no further trouble, cortical absorbing. Four months later, patient reported some trouble, but not seen.	22 days.	Nov. 30, 1878. V. O. S. = $\frac{4}{60}$ c + D. 11.00
14	F. 45 Eng.	Good.	2 years.	Normal.	Nov. 8, 1878 O. D. Ether. Græfe up. Same night patient struck her eye, causing "intense pain" for several hours.	15 days.	Nov. 23, 1878. V. O. D. = $\frac{6}{18}$ c + D. 10.00 S. 8 at 25. c + D. 15.00

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
15	F. 65 Irish.	Good.	7 years.	Normal.	Nov. 9, 1878. O. S. No anæsthesia Græfe up. Patient striving to look down caused some vitreous to escape. Wound came into good apposition.	14 days.	Feb. 19, 1879. V. O. S. = $\frac{6}{18}$ c + D. 11.00
16	F. 63 Irish.	Good.	2 years. Hard.	Pupil small; func. examination normal.	Nov. 10, 1878. O. D. No anæsthesia. Græfe up. Dec. 6, violent iritis and great pain. Some membrane in pupil.	26 days.	Dec. 6. 1878. V. O. D. = $\frac{6}{60}$ c + D. 10 00
17	M. 62 Am.	Good.	1 year.	Normal.	Nov. 19, 1878. O. S. Ether. Græfe up Normal.	22 days.	Nov 27, 1878. V. O. S. = $\frac{6}{18}$ c + D. 10.00 Sn. 8 at 20. c + D. 15.00
18	M. 60 Am.	Good.	5 years.	Normal.	Nov. 15. 1878. O. S. Ether. Græfe up. Cortical very soft; slight vitreous in wound A small hard nucleus slipped up under wound. This was gradually worked down to wound, and extracted without further loss of vitreous. Patient suffered from diarrhœa. Capsule in pupil to be removed hereafter.	15 days.	Nov. 30, 1878. V. O. D. = $\frac{5}{36}$ c + D. 12 00 Sm. 15 c + D 16 00
19	F. 60 Irish.	Good.	2 years.	Normal.	Nov. 15, 1878. O. S. Ether. Græfe up. Patient very restless, and constantly removing bandage. Capsule in pupil to be removed hereafter.	15 days.	Nov. 30, 1878. V. O. S. = $\frac{6}{60}$ c + D. 11.00

20	M. 70 Am.	Good.	Over-ripe. 12 years.	Failure of projection in inner and lower third.	Nov 22, 1878 O. D. No anæsthesia Græfe up. Eserine. Fluid; cortical escaped Bowman's scoop used to remove nucleus.	14 days.	Dec 8, 1878. V. O. S. = $\frac{5}{6}$ c + D. 10.00
21	F. 65 Irish.	Good.	In period of swelling.	Normal.	Nov. 24, 1878. O. D. No anæsthesia Græfe up. Eserine; much soft cortical; wound small; capsule left in pupil.	12 days.	Feb. 19, 1878. V. O. D = $\frac{6}{18}$ c + D. 11.00
22	M. 58 Dane.	Good.	6 years.	Normal.	Dec 6, 1878. O. S. Ether. Græfe up. Peripheral division of capsule. Sixth day some iris excised. Old choroidal trouble subsequently seen in fundus.	17 days.	Dec. 23, 1878. V. O. S. = $\frac{6}{18}$ c + D. 12.00
23	M. 56 Am.	Good.	2 years.	Normal.	Dec. 5, 1878. O. D. Ether. Græfe up.	23 days.	Dec 28, 1878. V. O. D = $\frac{6}{12}$ c + D. 5.50, c + D. 2.25 cyl.
24	F. 36 Irish.	Poor.	1½ years.	Normal.	Dec. 5, 1878. O. S. Ether. Græfe up. Some irritation.	31 days.	Jan. 5, 1878. V. O. S. = $\frac{6}{12}$ c + D. 12.00
25	M. 80 Am.	Good.	1 year.	Normal.	Dec. 5, 1878. O. D. Ether. Græfe up.	22 days.	Dec 27, 1878. V. O. S. = $\frac{6}{60}$ c + D. 11 00
26	F. 60 Irish.	Fair.	?	Normal.	Dec. 12, 1878. O. S. Ether. Græfe up.	19 days.	Dec. 31, 1878. V. O. S = $\frac{6}{9}$ c + D. 12.00

No.	Sex, Age, Nationality.	General Health.	Charaeter and Duration of Cataraet.	Funetional Examination, and Condition of Eye.	Date and Method of Operation. Anæsthesia. Course of Healing Proeess. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
27	M. 72 Am.	Good.	6 years.	Normal.	Dec. 12, 1878. O. S. Ether. Græfe up.	21 days.	Jan. 2, 1879. V. O. S. = $\frac{6}{24}$ c + D. 12.00 c + D. 16.00 Sn. 6.
28	F. 70 Am.	Very poor.	3 years.	Normal.	Dec. 12, 1878. O. S. Ether. Græfe up. Traumatic iritis and hypopyon. This all cleared, leaving slight membrane; subsequently broken by needle and hook.	43 days.	June 18, 1879. V. O S = $\frac{6}{24}$ c + D. 11.00
29	F. 49 Am.	Poor.	Semi-solid. Few years.	Projection not perfect.	Dec. 12, 1878. O. D. Ether. Græfe up. Eye deep; large amount of vitreous fluid; scoop used to remove two thirds of glutinous lens substance; collapse of globe. Patient restless and complaining; but wound healed well, though sunken.	19 days	Jan. 1, 1879. V. O. D. = perception of light.
30	M. 70 Am.	Good.	Traumatic.	Post. syn upwards; projection normal.	Jan. 1, 1879. O. D. Ether Græfe up. Eserine. Cut small; slight vitreous; large, hard nucleus removed by scoop and capsule by forceps. Patient had attack of cardiac trouble, with loss of consciousness on fifth day, and insisted on leaving.	5 days.	Counts fingers, doing well.
31	M. 58 Dane.	Good.	Senile.	Normal.	Jan. 2, 1879. O. D No anæsthesia. Græfe up. Eserine. Iritis fifth day and some blood; this disappeared with treatment; fundus subsequently seen to have old choroidal trouble.	19 days.	Feb. 1, 1879. V. O. D = $\frac{6}{12}$ c + D. 10.00

32	M. 65 Am.	Fair.	Senile.	Normal.	Jan. 9. 1879. O. D. Ether. Græfe up Some vitreous in attempting to remove cortical.	50 days.	Feb. 26, 1879. V. O. D. $=\frac{6}{9}$ c + D. 13.00
33	M. 54 Irish.	Good.	3 years.	Normal.	Jan. 16, 1879. O. D. Ether. Græfe up. Considerable blood, otherwise normal Three weeks after operation, had pain and a small mass of granulations size of small bean; snipped off outer portion of wound. No return. Subsequent capsule op. by stop needle and hook.	36 days.	March 8, 1879. V. O. D. $=\frac{6}{24}$ c + D. 11.00.
34	F 60 Irish.	Bad.	7 years.	Diverg. Strabismus.	Jan. 18, 1879. O. D Ether. Græfe up. Hemorrhage severe. Eye could not be kept clear of blood. Some cortical remained, which was subsequently removed by suction operation.	33 days.	April 3, 1879. V. O. D. $=\frac{6}{18}$ c + D. 11.00 c + D. 15 00 Sn. O 8 at 24 c. m.
35	M. 72 Am.	Bad.	8 years.	Normal.	Jan. 30, 1879. O. D. Ether. Græfe up. Considerable blood.	31 days.	Feb. 20, 1879. V. O. D. $=\frac{6}{18}$ c + D. 11.00
36	M 40 Irish.	Fair.	3 years.	Normal.	Feb. 6, 1879. O. D. Ether. Græfe up. Thought to be soft and a suction attempted. This failing, Græfe down. Patient restless and removing bandage.	14 days.	Feb. 20, 1879. V. $=\frac{6}{36}$ c + D. 11.00
37	F. 76 Am.	Good.	4 years.	Normal.	Feb. 6, 1879. O. D. Ether. Græfe up. Some vitreous after removal of speculum. Iritis. Vitreous obstructed.	18 days.	M'ch 15, 1879. V = 0.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operation. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
38	F. 65 Irish.	Good.	Senile.	Normal.	Feb. 8, 1879. O. D. Ether. Græfe up.	13 days.	Feb. 21, 1879. V. O. D. = $\frac{6}{24}$ c + D. 11.00
39	M. 45 Ger.	Good.	Traumatic. 7 years.	Firm post. syn. either side and down.	Feb. 13, 1879. O. S. Ether. Græfe up. Mild iritis and pupillary membrane to be broken.	18 days.	March 3, 1879. V. O. S. = $\frac{3}{60}$ c + D. 11 00
40	M. 72 Eng.	Good.	12 years.	Partial failure of projection upwards; catarrh.	Feb. 16, 1879. O. S. Ether. Græfe up. Some vitreous with lens; scoop removed a mass of semi-soft cortical; collapse of cornea; catarrhal secretion, deep-seated pain, hazy cornea. Anterior chamber filled with inflam. products.	25 days.	Mar. 13, 1879. Perception of light.
41	M. 60 Am.	Good.	2 years.	Normal. Blow on eye four years ago.	Feb. 27, 1879. O. S. Ether. Græfe up. Small cut. In cutting capsule lens dislocated upwards. It was worked down and removed without difficulty.	20 days.	Mar. 19, 1879. V. O. S. = $\frac{6}{24}$ c + D. 12.00
42	M. 62 Irish.	Good.	2 years.	Projection not perfect.	March 11, 1879. O. S. Ether. Græfe up. Patient had epileptic attacks during convalescence.	12 days.	Mar. 23, 1879. V. O. S. = $\frac{6}{24}$ c + D. 11.00
43	F. 70 Am.	Fair. Deaf and Dumb.	6 months.	Eye follows candle. No examination possible O. D. no V. and turns in.	March 14, 1879. O. S. Ether. Græfe up Cut small, but lens came well.	34 days.	April 17, 1879. V. O. S. = $\frac{6}{12}$ c + D. 12.00

44	M. 69 Scotch.	Good.	10 years.	Normal.	March 15, 1879. O. S. No anæsthesia. Eserine.	14 days.	May 23, 1879. V. O. S. = $\frac{6}{18}$ c + D. 13.00
45	M. 73 Eng.	Fair.	10 years.	Normal.	March 15, 1879. Ether. Græfe up. Considerable bleeding, and cortical not well cleared in consequence. Patient much troubled by cough and catarrh of conjunctiva; latter present seven months later.	21 days.	Oct. 24, 1879. V.O. D. = $\frac{6}{36}$ c — D. 2.00 Same s glasses. July 16, 1879.
46	M. 70 Irish.	Good.	6 months.	Normal.	Mar. 26, 1879. O. S. Ether. Græfe up. Capsule to be removed.	14 days.	May 21, 1879. V. O. S. = $\frac{6}{36}$ c + D. 11.00
47	M. 79 Am.	Good.	1½ years.	Normal.	April 2, 1879. O. S. Ether. Græfe up. Eye tender subsequently.	52 days.	May 24, 1879. V. O. S. = $\frac{6}{18}$ c + D. 14.00
48	F. 58 Am.	Good.	1 year.	Normal.	April 7, 1879. O. D. No anæsthesia. Eserine. Considerable cortical in pupil subsequently.	17 days	May 31, 1879. V. O. D. = $\frac{6}{36}$ c + D 12 00
49	M. 63 Am.	Good.	2 years.	Normal. Accident to eye 2 years ago.	April 8, 1879. O.D. Ether. Græfe up.	14 days.	April 22, 1879. V. O. D. = $\frac{6}{12}$ c + D. 10.00
50	M. 72 Am.	Good.	2 years.	Normal.	April '9, 1879. O S No anæsthesia. Eserine. Græfe up. Subsequently much cortical in pupil. Torn by Agnew's op., May 23.	14 days.	May 31, 1879. V. O. S. = $\frac{6}{36}$

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51	F. 73 Am.	Good	1½ years.	Normal.	April 26, 1879. O. S. No anæsthesia. Græfe up. Patient very restless under operation.	16 days.	June 28, 1879. V. O. S. = $\frac{6}{18}$ c + D 12 00
52	M. 47 Ger.	Bad. Specific.	3 years.	Not normal. Failure up. Ant. chamber shallow; pupil dilated; globe hard; doubt as to intra-ocular trouble.	April 22, 1879. O. D. Ether. Græfe up. Soft; large amount removed; pupil well cleared; wound closed slowly, and some blood in ant. chamber; some keratitis.	10 days.	May 12, 1879. V. O. D. = $\frac{1}{60}$ c + D. 11.00
53	M. 56 N. S.	Good.	5 years.	Normal.	April 29, 1879. O D. No anæsthesia. Græfe up. Patient struck his eye fourth night, causing pain and hemorrhage.	18 days.	May 17, 1879. V. O. D. = $\frac{6}{24}$ c + D. 11.00 and slit.
54	F. 57 Scot.	Fair.	7 years. Post polar seen then.	Choroiditis. Func ex. nearly normal.	April 30, 1879. O. S. No anæsthesia. Græfe up. Patient had pain and swelling of lids after bad news. When examined for vision much floating opacity in vitreous.	14 days.	May 14, 1879. V. O. S. = $\frac{6}{36}$ c + D. 11.00
55	F. 60 Irish.	Good.	2 years.	Normal.	May 10, 1879. O. D No anæsthesia. Græfe up. Eserine. Some subsequent iritis closed pupil.	19 days.	May 29, 1879. V. O. D. = $\frac{6}{36}$ c + D. 11.00

56	F. 62 Irish.	Good.	7 months after blow.	Normal.	May 10, 1879. O. S. No anæsthesia. Græfe up. Eserine.	14 days.	May 24, 1879. V. O. S. $= \frac{6}{9}$ c + D. 11.00
57	F. 47 Scot.	Fair.	3 years.	Projection dull. Old choroidal.	May 18, 1879. O. D. No anæsthesia. Græfe up. Eserine.	13 days.	June 9, 1879. V. O. D. $= \frac{6}{24}$ c + D. 12.00
58	F. 60 Am.	Good.	5 years.	Normal.	May 18, 1879. O. D. No anæsthesia Græfe up. Eserine. Cut too small for lens; considerable force used.	13 days.	June 7, 1879. V. O D $= \frac{6}{36}$ c + D. 11 00
59	M. 55 Am.	Good.	4 years.	Normal.	May 24, 1879. O. D. No anæsthesia. Eserine. Græfe up.	14 days.	June 7, 1879. V.O. D $= \frac{6}{18}$ c + D. 11 00.
60	M. 56 N. S.	Good.	3 years.	Normal.	May 20, 1879. O. S. No anæsthesia. Græfe up,	12 days.	June 15, 1879. V. O. S. $= \frac{6}{36}$ c + D. 11.00
61	M. 74 Am.	Fair.	3 years.	Normal. Old chronic conjunctivitis. Operation refused for six months on this account.	May 20, 1879. O. S. Ether. Græfe up. Great conjunctival bleeding, preventing clearing of cortical from pupil. Great irritation and conjunctivitis; chemosis. Swollen cortical seen when blood cleared up. Operation was demanded.	23 days.	Perception light.
62	M. 34 Irish.	Good.	2 years. Traumatic.	Normal.	May 20, 1879. O. D. Ether. Græfe up. Soft cortical, but large nucleus.	11 days.	May 31, 1879. V. O. D $= \frac{6}{60}$ c + D 11.00

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63	F. 63 Eng.	Fair.	Senile.		May 28, 1879. O. S. No anæsthesia Græfe up. Patient restless. Much bleeding. Fluid vitreous lost, but cortical and nucleus removed, — probably two thirds. Some subsequent pain and cortical in pupil. Patient eloped tenth day; induced to return, but eloped again, yet no pain.	10 days.	V. O. S. = $\frac{1}{18}$
64	M. 60 Irish.	Good.	Senile.	Normal. Shallow anterior chamber.	May 28, 1879. O. D. Ether. Græfe up. Anterior chamber very shallow. Lens broke in pieces; one attached to iris removed with difficulty by instruments.	38 days.	July 5, 1879. V. O. D. = $\frac{6}{18}$ c + D. 11.00
65	F. 50 Fran.	Good.	3 years.	Normal.	June 12, 1879. O. D. Ether. Græfe up. To return.	33 days.	July 16, 1879. V. O. D. = $\frac{6}{36}$ c + D. 11.00
66	M. 62 Irish.	Fair.	Senile.	Normal.	June 5, 1879. O. D. Ether. Græfe up.	27 days.	June 12, 1879. V. O. D. = $\frac{6}{12}$ c + D. 9.00
67	M. 63 Irish.	Fair.	Senile.	Normal.	June 18, 1879. O. D. Ether. Græfe up.	22 days.	July 10, 1879. V. O. D. = $\frac{6}{24}$ c + D. 11.00
68	M. 74 Am.	Fair.	8 years.	Failure of projection.	June 18, 1879. O. D. Ether. Considerable hemorrhage; some iritis.	31 days.	Aug. 6, 1879. V. O. D. = $\frac{6}{18}$ c + D. 10.00

69	M. 54 Am.	Poor.	2 years.	Failure of projection; choroiditis other eye.	June 22, 1879. O. D. No anæsthesia. Græfe up. Capsule cut peripherically. Fluid vitreous appeared and lost in considerable quantity on removing lens. Patient had general paralysis; acute catarrh seventh day and fell down stairs walking in sleep, but no serious injury. Patient eloped.	23 days.	Counts fingers at m. 50.
70	F. 50 Irish.	Fair.	6 months.	Normal.	July 10, 1879. O. S. Ether. Græfe up. Capsule in pupil.	30 days.	Aug 10, 1879. V. O. S. $= \frac{6}{24}$ c + D. 10.00
71	M. 51 Irish.	Good.	Traumatic capsular. post. syn.	Normal.	June 27, 1879. O. S Ether. Græfe up. Forceps removed large mass of dense capsular and cretaceous tissue, leaving good clear pupil.	20 days.	Aug. 15, 1879. V. O. S. $= \frac{4}{24}$ c + D. 11.00
72	F. 35 Irish.	Good.	3 years.	Normal.	July 24, 1879. O S. No anæsthesia. Small cut enlarged; slight vitreous; lens very thick; cortical in pupil; floating opacities in vitreous.	31 days	Aug. 24, 1879. V. O. S. fingers at one metre.
73	M. 66 Am.	Good.	5 years.	Normal.	July 24, 1879. O. D. Ether. Græfe up. Conjunctival suture used.	14 days.	Aug. 7, 1879. V. O. D. $= \frac{6}{18}$ c + D. 8.00 c + D. 12 00 reads Sn. 0.50
74	F. 65 Am.	Fair.	2 years.	Normal.	July 30, 1879. O. S. Ether. Græfe up. Small amount of fluid vitreous; conjunctival stitches; subsequently blood in ant. chamber.	24 days.	Sept. 26, 1879. V. O. S. $= \frac{6}{18}$ c + D. 6.00

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75	M. 56 Am.		20 years.		Sept. 7, 1879. O. D. Ether. Græfe. Thymol solution to eye and instruments; iritis and exudation in pupil. [Same patient as next below.]	25 days.	Perception of light.
76	M. 56 Am.		2 years.		Sept. 7, 1879. O. S. Ether. Græfe up. Thymol as above; one suture at apex of conjunc. flap; capsule in pupil. To return.	25 days.	Oct. 1, 1879. V. O. S. $= \frac{6}{60}$ c + D. 10.00
77	F. 52 Am.		9 months.		Sept. 9, 1879. O. D. Ether. Græfe up. One suture at apex of conjunc. flap; thymol to eye and instruments.	13 days.	c + D. 10.00 V. O. D. $= \frac{6}{24}$
78	F. 54 Am.		2 years.		Sept. 9, 1879. O S. Ether. Græfe up. Thymol to eye; instruments and thymol gauze. Before iridectomy forceps struck eye, causing detachment of iris; iris attached to wound across ant. chamber.	13 days.	Perception of light.
79	F. 48 Eng.		4 years.		Sept. 23, 1879. O. S. Ether. Græfe.	31 days.	Oct. 24, 1879. V. O. S. $= \frac{6}{36}$ c + D. 14.00 Reading + D. 16.00

80	F. 18 Am.	Good.	Congenital. 9 years.	Normal.	Sept. 24, 1879. O. S. Ether. Græfe up. Soft corticalis. Capsule for future breaking. Patient had central congenital cataract, and at nine years whole lens affected. Discission thought of.	20 days.	Oct. 14, 1879. V. O. S. = $\frac{6}{60}$ c + D. 11.00
81	M. 75 Am.	Good.	7 years.		Sept. 30, 1879. O. D. No anæsthesia. Græfe.	16 days.	Oct. 16, 1879. V. O. D. = $\frac{6}{60}$ c + D. 11.00
82	F. 64 Am.	Good.	4 years.	Normal.	Sept. 30, 1879. O. D. Ether. Græfe up.	18 days.	Oct. 17, 1879. V. O. D. = $\frac{6}{36}$ c + D. 11.00
83	M. 65 Irish.	Good.	7 years.	Normal.	Sept. 30, 1879. O S. Ether. Græfe up. Lens removed with scoop. Considerable vitreous lost. Wound healed slowly with iritis and closure of pupil.	45 days.	Perception of light.

MODIFIED LINEAR OPERATION.

1	M. 70 N. S.	Good.	Senile. 2 years.	Normal.	Aug 27, 1879. O. S. No anæsthesia. Modified linear extraction. Considerable blood in pupil interfered with iridectomy. Floating opacities in vitreous subsequently seen, though the convalescence was normal.	30 days.	Sept. 26, 1879. V. O. S. = $\frac{6}{18}$ c + D. 10.00

DISCISSION OPERATION.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	M. 9 Am.	Good.	Traumatic. 5 weeks.	Normal.	Sept. 23, 1879. O. S. Ether. Lens needled.	3 days.	

SUCTION OPERATIONS.

1	M. 7 Am.	Good.	Traumatic. Soft.		Nov. 8, 1878. O. S. Ether. Pupil contracted upon escape of aqueous, hindering manœuvring of instruments; lens material mostly evacuated. To return in future.	4 days.	Counts fingers.
2	M. 53 Am.	Good.	Traumatic.	Cicatrix in cornea from wound.	Nov. 24, 1878. O. D. Ether. Suction with Lüer's tube. No atropine. Tube entered six or eight times, as lens was so hard. Opaque capsule left in field of pupil. Pain great during day. At discharge capsule and lens substance in pupil, over which fine blood-vessels extend to corneal cicatrix.	12 days.	Sees motion of hand.
3	M. 34 Am.	Good.	Traumatic. Soft.	Probably foreign body in lens; old iritis; discolored iris.	Dec. 8, 1878. O. D. Ether. Suction removed all of lens and a small black point, — possibly foreign body.	5 days.	Jan. 2, 1878. V. O. D. $= \frac{6}{12}$ c. + D. 12.00

4	M. 50 Irish.	Good.	Hard nucleus. 7 months.	Normal.	Dec. 30, 1878. O. S. Ether Suction removed all of lens except hard nucleus. Wound enlarged with scissors and nucleus removed Great hemorrhage from iris during whole operation.	11 days.	Jan. 5, 1879. V. O. S. = $\frac{6}{18}$ c + D. 12.00
5	M. 32 Irish.	Good.	7 days. Traumatic.	Lens wounded through cornea. Functional examination good.	Feb. 6, 1879. O. S. Ether. Suction. Some subsequent pain. Good pupil, but one post. synechia.	18 days.	Feb. 24, 1879. V. O. S. = $\frac{6}{18}$ c + D. 14.00
6	F. 7 Am.	Good.	Traumatic. Soft.	Normal.	Feb. 13, 1879. O. D. Ether. Suction. Bandage for few days; no pain. Some capsule in pupil but centre clear.	14 days.	Feb. 27, 1879. V. O. D. = $\frac{6}{18}$ c + D. 13.00
7	M. 30 Am.	Good.	Traumatic.	Post. synechia. Foreign body in lens probably. Functional examination normal.	Feb 13, 1879 O. S. Ether. Suction. Synechia divided when puncture was made. A small black body came into suction tube, possibly foreign body. Pupil drawn down and a little in.	10 days.	Feb. 23, 1879. V. O. S. = $\frac{6}{6}$ c + D. 11.00
8	F. 26 Am.	Good.	Traumatic. 2 years.	Normal.	April 9, 1879. Ether. Suction. Atropine. Small amount of capsule left in anterior chamber.	5 days.	April 14, 1879. V. O. S. = $\frac{6}{6}$ c + D. 12 00
9	M. 15 Am.	Good.	Traumatic. 3 weeks.	Anterior synechia.	Aug. 19, 1879. O S. Ether. Suction. Iritis followed, causing closed pupil. Future iridectomy.	27 days.	Sept 15, 1879. Perception of light.

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10	F. 34 Irish.	Good.	Choroidal trouble; possible partial separation.		Nov. 26, 1878. O. U. Ether. Suction. Done solely with hope of vision to move round with. Capsule subsequently broken. O. S.	20 days.	April 20, 1879. V. O. S $= \frac{2}{36}$ c + D. 11.00
11	M. 34 Irish.	Good.	Traumatic. Dialysis of iris.		Jan. 8, 1879 O D. Ether. Suction to relieve tension and remove débris of lens.	30 days.	Feb. 20, 1879. Fingers at .50
12	F. 23 Eng.	Good.	1½ years. No history of injury.		Jan. 19, 1879. O. S Ether. Suction for cosmetic purposes. O D. Diverg. Strabis. Staphy. post. V. $= \frac{6}{24}$ c — D. 20.00.	20 days.	Nov 7, 1879. V. O. S. tells fingers at 1 m.
13	M. 19 Can.	Good.	1½ years.		Feb. 6, 1879. O. S. Ether. Suction done with but little hope of success as O U. one and one half years before were seen, with excessive M. and sep. retina.	22 days.	Perception of light.
14	M. 35 Am.	Good.	Traumatic.		April 10, 1879. O. D. Ether. Suction done by passing instrument through wound of cornea and removing soft cortical.	5 days.	V. not recorded.
15	M. 5 Can.	Good.	Traumatic.		April 22, 1879. O. D. Ether. Cornea had been cut through by screw-driver. Soft lens removed through the wound. O. S. had been lost and this eye had vision only to find way about.	12 days.	No record.

16	M. 62 Can.	Good.	Traumatic.		June 27, 1879. O. D. Débris of lens removed. Iris adherent and pupil blocked with lymph.	4 days.	No record.
17	M. 43 Am.	Good.	Traumatic. 5 years.		July 7, 1879. O. D. No ether. Suction removed most of lens, thickened capsule interfering greatly.	10 days.	July 16, 1879. V. O. D. = $\frac{6}{36}$
18	M. 50 Irish.	Good.	Traumatic. 3 weeks.		Aug. 19, 1879. O. S. No ether. Suction done Some thickened capsule left in pupil.		Oct. 13, 1879. V. O. S. = $\frac{6}{6}$ without glasses.
19	M. 43 N. S.	Good.	Traumatic. 1 week.		Sept. 1, 1879. O. D. Ether. Suction done. Some capsule left in pupil.	9 days.	No record.
20	F. 10 Am.	Good.	Traumatic 6 weeks.		June 26, 1879. O. D. Ether. Suction.	8 days.	July 4, 1879. V. O. D. = $\frac{6}{24}$ c + D. 11.00

FIFTY-FIFTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1880.

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REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1880.

In behalf of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the report of the surgeons for the year ending Sept. 30, 1880.

In the last annual report of the Managers it was stated that the number of patients had not increased in the ordinary ratio, only 94 more cases having been treated in 1879 than in 1878. During the past year, however, the increase has again become considerable, and the total number of patients has risen as high as 9,866, or 307 more than in 1879. The pressure upon all the available resources of the institution, the demand for more space and increased accommodation, are therefore greater than ever before. Moreover, judging of the future by the past and the present, the needs of the institution are not unlikely to continue to grow yearly greater.

Fortunately the new wing, now being rapidly completed and got ready for use, will soon supply the want of additional accommodation so long felt and repeatedly expressed by the officers of the Infirmary, and will render their efforts in behalf of the suffering poor at once easier and more efficacious. This long-standing want being satisfactorily supplied, the questions which now most closely concern the Managers, and

exercise their judgment and foresight, relate to the finances of the institution committed to their charge.

According to a report submitted by the Treasurer, the current expenses of the Infirmary during the last year have been less by $26.73 than those of the previous year, notwithstanding the increase in cost of fuel and of other necessaries, and, we will add, notwithstanding the larger attendance of patients. It is manifest from these facts and considerations that the institution is managed with the utmost attainable degree of economy consistent with real usefulness. We must, however, adds the Treasurer, expect an increase of expenditure from this time forward, as the addition to the Infirmary, now in process of construction, will inevitably lead to the accommodation and attendance of a larger number of patients than have heretofore applied for treatment. The Managers, therefore, find themselves called upon to foresee, and if possible provide for, an increase in the future current expenses of the institution.

The new building, when finished, will have cost in the aggregate at least $33,000. To meet this necessary, and indeed indispensable expenditure, a sum amounting to somewhat over $20,000, which had been collected, has already been paid away by the Treasurer for work done, leaving nearly $12,000 still owing to the contractors for the building. It is, of course, very desirable, in the interests of the Infirmary, that this indebtedness should be met by the Managers, if possible, without incurring any future curtailment of the present actual income of the institution, inasmuch as its pecuniary resources have lately proved but barely sufficient to admit of our meeting the current expenses of the Infirmary, while an increased future expenditure must now be anticipated and provided for.

The Managers are confident, however, that it will be suffi-

cient to call the attention of the public and of the Legislature to the needs, present and future, of this most useful and truly charitable institution; and that when its past history and its immediate prospects are taken into consideration, the necessary assistance from without will not fail to be forthcoming.

T. B. CURTIS.
W. R. ROBESON.
ARTHUR ROTCH.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen,—The surgeons of the Infirmary would hereby present their report for the year ending Sept. 30, 1880.

The total number of patients applying has been 9,866, — an increase of 307 over the previous year. Of this number in the out-patient department there have been 6,736 for diseases of the eye, and 2,654 for diseases of the ear. In addition to these, 476 have been admitted as house patients.

The present building, erected and opened thirty years ago, was amply sufficient for the 1,500 who then applied. Since then the increase of applicants from 1,500 to nearly 10,000 yearly has rendered obvious the need of greater room and facilities for their treatment.

It is with much gratification that the surgeons see the long-needed additions to the buildings of the Infirmary now in rapid progress towards completion, and they would herewith express their appreciation of the strong interest taken by the Managers in extending the scope of the Infirmary, and in responding to the requirements of the steadily growing numbers who apply for relief.

The statistics of the diseases of the eye and ear, and the operations performed during the past year, are here appended.

The acknowledgments of the surgeons are due for efficient aid afforded by the assistant surgeons, the ophthalmic interne and externe, the aural externe, and the superintendent.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1st, 1879, to October 1st, 1880.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	270
Females	206
	476

Out-Patients.

Whole number of eye patients	6,736
Whole number of ear patients	2,654
Total eye and ear patients	9,390
Residents of Boston	5,602
" other parts of Massachusetts	3,384
" Maine	141
" New Hampshire	116
" Vermont	43
" Rhode Island	24
" Connecticut	11
" other States	21
" British Provinces and foreign countries	43
Unrecorded	5
	9,390

Eye patients: —		
Males	3,740	
Females	2,996	
		6,736
Ear patients: —		
Males	1,420	
Females	1,234	
		2,654

Occupation of Eye Patients.

Agents	21
Barbers	22
Children	1,568
Conductors	17
Cooks	29
Carpenters	121
Clergymen	2
Clerks	230
Dentists	2
Domestics	561
Drivers	29
Engineers	14
Errand boys	5
Farmers	108
Firemen	17
Home	1,123
Laborers	618
Mariners	75
Machinists	205
Masons	32
Mill hands	209
Milliners	8
Merchants	10
Mechanics	190

Musicians	5
Nurses	17
Painters	47
Printers	56
Railroad employés	17
Seamstresses	239
Shoemakers	150
Stone cutters	149
Students	110
Teachers	36
Tailors	56
Teamsters	63
Waiters	25
Others	529
Unrecorded	21
	6,736

Occupation of Ear Patients.

Agents	9
Barbers	3
Blacksmiths	24
Book-keepers	9
Carpenters	53
Children	626
Clergymen	2
Clerks	86
Coachmen	6
Conductors	3
Curriers	13
Designers	1
Domestics	161
Drivers	5
Engineers	4
Errand boys	15

Farmers	39
Firemen	8
Home	536
Infants	77
Laborers	283
Laundry	7
Machinists	40
Mariners	30
Mechanics	64
Merchants	19
Milliners	3
Mill operatives	122
Musicians	6
Nurses	7
Painters	16
Printers	21
Seamstresses	97
Shoemakers	62
Stone cutters	22
Students	9
Tailors	17
Teachers	8
Teamsters	30
Waiters	13
Watchmen	3
Others	87
Unrecorded	8
	2,654

Diseases of the Eye.

Lids.

Blepharadenitis	404
Lippitudo	2

Hordeolum	58
Eversion of punctum	2
Ectropion	12
Entropion	8
Trichiasis	31
Anchyloblepharon	2
Symblepharon	1
Œdema	24
Blepharitis	2
Eczema	26
Abscess	28
Chalazion	92
Cyst	5
Verruca	2
Tumor	4
Nævus	2
Lipoma	1
Molluscum	1
Epithelioma	3
Syphilitic ulcer	1
Partial closure of palpebral aperture	1
Ptosis	9
	721

Conjunctiva.

Conjunctivitis, catarrhal	1,262
" blenorrhoic	24
" neonatorum	24
" granular	168
" " with pannus	70
" phlyctenular	249
" traumatic	45
" diphtheritic	2
Fungous granulations on conjunctiva	2

Ophthalmia, gonorrhœal	4
Chemosis	9
Ecchymosis	45
Pterygium	42
Pinguecula	10
Foreign body on conjunctiva	49
Dermoid tumor	1
Epithelioma	3
	2,016

Cornea and Sclera.

Keratitis	229
" phlyctenular	14
" interstitial	8
" traumatic	24
Kerato-iritis	12
Kerato-scleritis	5
Ulcer of cornea	309
" " vascular	27
" " traumatic	29
Abscess of cornea	7
Abrasion "	50
Rupture "	10
Foreign body on cornea	503
Conical cornea	1
Staphyloma anterior	22
Herpes zoster	1
Leucoma	185
Hypopion	22
Tumor of cornea	1
Scleritis	14
Episcleritis	8
Foreign body on sclera	5
	1,486

Iris, Ciliary Body, and Choroid.

Iritis	146
" syphilitic	16
" rheumatic	4
" traumatic	11
Prolapse of iris	7
Iridodonesis	2
Coloboma of iris	3
Mydriasis	11
Myosis	3
Posterior synechia	41
Anterior synechia	20
Dialysis of iris	3
Ciliary injection	32
Cyclitis	3
Irido-cyclitis	10
Wound of ciliary body	4
Choroiditis	128
Sclerotico-choroiditis posterior	62
Irido-choroiditis	9
Retino-choroiditis	2
Glaucoma	23
Rupture of choroid	3
	543

Retina.

Retinitis	3
" albuminurica	5
" apoplectica	2
" pigmentosa	4
Neuro-retinitis	8
Separation of retina	23
	45

Optic Nerve.

Neuritis	13
Atrophy	48
	61

Vitreous.

Opacities	29
Hemorrhage	1
	30

Lens.

Cataract, hard and soft	124
" incipient	35
" congenital	19
" traumatic	49
" capsular	11
" posterior polar	4
Dislocation of lens	13
Aphakia	2
	257

Lesions of Globe and Orbit.

Hydrophthalmos	2
Exophthalmos	3
Microphthalmos	3
Phthisis bulbi	39
Rupture of globe	6
Tumor of globe	2
Tumor of orbit	1
Foreign body in anterior chamber	2
Congenital absence of right eye	1
Abscess of brow	6
	65

Affections of Percipient Apparatus.

Amblyopia	75
Hemeralopia	8
Amblyopia ex abusu	22
Muscæ volitantes	17
Scotoma	3
	125

Refraction and Accommodation.

Myopia	144
Hypermetropia	382
Presbyopia	158
Astigmatism	198
Asthenopia	121
	1,003

Muscular Affections and Neuroses.

Paralysis of third pair	6
" sixth "	2
" seventh "	1
" accommodation	9
Diplopia	15
Strabismus convergens	142
" divergens	17
Insufficiency of internal recti	12
Nystagmus	17
Neuralgia, ciliary	6
" fifth pair	2
" supraorbital	7
" circumorbital	11
Ciliary spasm	2
Blepharo spasm	12
	261

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	123
Abscess of lachrymal sac	48
Lachrymal fistula	7
	178

General Injuries.

Blows and cuts	117
Burns	29
	146

Unfit	241
Unrecorded	34
	275

Recapitulation of Eye Diseases.

Lids	721
Conjunctiva	2,016
Cornea and sclera	1,486
Iris, ciliary body, and choroid	543
Retina	45
Optic nerve	61
Vitreous	30
Lens	257
Lesions of globe and orbit	65
Affections of percipient apparatus	125
Refraction and accommodation	1,003
Muscular affections and neuroses	261
Lachrymal apparatus	178
General injuries	146
Unfit and unrecorded	275
	7,212

Operations on the Eye.

Cataract.

Extraction, method of Græfe, hard cataract	65
" " " soft "	2
" " " traumatic cataract	1
" " " glaucomatous "	1
" " " previous iridectomy	1
Suction	18
Discission	3
Removal of dislocated lens	1
	92

Iridectomy.

For artificial pupil	27
" glaucoma	7
" old iritis	2
" foreign body on iris	1
" irido-choroiditis	1
	38

Enucleation.

For sympathetic ophthalmia	10
" disorganized eye	17
" foreign body in globe	3
" glioma	1
" sarcoma	1
" epithelioma	2
	34

Other Operations.

Wecker's operation for closed pupil	2
Neurotomy	3
Noyes's double-hook operation	1

Agnew's hook operation	6
Division of capsule	10
Saemisch's operation for ulcer of cornea	1
Foreign body in globe removed	1
" " " " " by magnet	3
" " " anterior chamber removed	1
" " " sclera "	5
" " " cornea "	502
" " " conjunctiva "	49
Paracentesis corneæ	5
Peritomy	3
Excision of anterior staphyloma	3
Sclerotomy for glaucoma	4
Pterygium, Desmarres operation for	13
Symblepharon	2
" transplanting conjunctiva from rabbit for	1
Strabismus convergens	93
" divergens	7
Entropion	1
Trichiasis, Snellen's operation	3
" Streatfield's "	10
" removal of ciliary border	7
Ectropion	2
" Wolfe's operation	1
Bowman's operation for tear passages	34
Canthoplasty	9
Chalazion	18
Cyst of lids	2
Nævus, galvano cautery for	1
Pinguecula, hypertrophied, removal	1
Epithelioma of globe	1
" of lids	2
Plastic of lids	4

Cyst of orbit	1
" of brow	3
Miscellaneous	16
	831
Total	995

STATISTICAL REPORT OF DISEASES OF THE EAR.

OCT. 1, 1879, TO OCT. 1, 1880.

Abscess of auricle and meatus	24
Atresia of meatus	1
Aspergillus	1
Cyst of auricle	1
Deaf-mutism	11
Eczema	22
Fibromata of lobe	2
Fissure "	2
Foreign bodies in meatus	29
Fractere of osseous "	1
Furuncle in meatus	9
Hyperostosis in meatus	1
Microtia	1
Otalgia	3
Otitis externa circumscripta	74
" " diffusa	51
Obstruction of meatus by cerumen	447
Otitis interna seu labyrinthica	15
" media acuta	185
" " subacuta	79
" " catarrhalis chronica	649
" " purulenta	748
" " " with mastoid abscess	7
" " " with polypi	48
" " acuta, with serous accumulation	17
" " catarrhalis tubalis	24

Otalgia neuralgica	41
Perforation of membrana tympani	2
Rupture " "	10
Tinnitus aurium	21
Ulcer membrana tympani	1
Unfit	75
Unrecorded	22
Other diseases	30
	2,654

STATISTICAL REPORT OF EIGHTY-ONE OPERATIONS

For the Extraction of Cataract,

PERFORMED IN THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY BY THE SURGICAL STAFF

DURING THE YEAR ENDING SEPT. 30, 1880.

COMPILED BY ROBERT WILLARD, M. D.

DURING the year ending Sept. 30, 1880, there have been performed in the infirmary eighty-one operations for the extraction of cataract; of this number sixty-nine have been performed by the method of Græfe, and twelve by suction. Besides these, the operation of Græfe has been done once to remove a glaucomatous cataract, and suction six times to reduce tension or remove the débris of the lens, upon eyes which offered little or no hope of the restoration of vision.

Till the year 1877 it was the custom with very rare exceptions to operate with the patient thoroughly under the influence of sulphuric ether; but the objections to it from the congestion of the blood-vessels of the head, which accompanies its administration, and the succeeding nausea and vomiting, have led to its disuse the past year in thirty-six cases out of the sixty-nine operated on by the method of Græfe.

The operation performed in the sixty-nine cases has been in all essential particulars that of Græfe, the only variation being the instillation in thirty-five cases of a 1 % solution of eserine in the eye before and sometimes after the operation. No disagreeable symptom beyond a slight temporary smarting sensation seems to have been induced by this manœuvre, while it is believed to be efficacious in preventing a prolapse

of the iris into the corners of the wound. In three cases the conjunctival sac has been washed out before the operation with, and the instruments used have been dipped in, a 4 % solution of boracic acid, and with supposed good effect.

The treatment in all the uncomplicated cases has been to keep the eyes unopened from six to eight days, removing the bandage daily for a few moments to ascertain the condition of the lids and the nature of the discharge; if no unfavorable change has been found to have taken place, the lids have been carefully washed with lukewarm water, and the bandage re-applied.

The average age of the sixty-nine patients was 62.3 years, the extremes being 18 and 80.

The nationalities were as follows, viz. : —

American	32
Irish	29
English	3
Welsh	1
Scotch	1
British-American	2
Irish-American	1
	69

The average duration of treatment has been 22.6 days; the shortest time 10 days, and the longest 86 days. The following table gives the result in the 69 cases operated on by the method of Græfe, — thirty-six without ether and thirty-three with ether, the vision being taken in the great majority of cases at the time of discharge. In all these cases, with the exception of two, Nos. 13 and 22, in which the error of refraction was corrected by a cylindrical glass, the measurements were made with the ordinary convex lens.

Vision $\frac{6}{6}$	1	Vision $\frac{6}{60}$	5
" $\frac{6}{12}$	5	" $\frac{4}{60}$	2
" $\frac{6}{18}$	8	" $\frac{3}{60}$	1
" $\frac{5}{18}$	1	" $\frac{1.5}{36}$	1
" $\frac{6}{24}$	16	" $\frac{2}{60}$	1
" $\frac{3}{12}$	1	" perception of light	4
" $\frac{6}{36}$	16		
" $\frac{3}{18}$	1	" 0	3
" $\frac{3}{24}$	3		
	52		17
Total	69		

Taking the fraction $\frac{1}{10}$ as representing good vision, and all below that who are able to see to find their way about, or whom a secondary operation would benefit, as a partial success, we have: —

Good vision	57	or	82.5 per cent.
Partial success	9	"	13.3 " "
Failure	3	"	4.2 " "
	69		100.0

In the above cases were the following varieties of cataract: —

Hard cataract	55
Hypermature cataract	10
Soft "	2
Posterior polar "	1
Traumatic "	1
	69

Projection was deficient in eight: Nos. 1, 7, 10, 28, 40, 43, 51, and 52. Two, Nos. 20 and 45, had lachrymal catarrh. Two, Nos. 52 and 63, were done at the earnest request of the

patient, but with little hope of vision, and three developed senile dementia after the operation.

Vitreous in small amount was lost in six cases, which recovered with the following amounts of vision : —

Case No.	9	. . .	V. = $\frac{6}{24}$
" "	22	. . .	" = $\frac{3}{24}$
" "	23	. . .	" = $\frac{2}{60}$
" "	27	. . .	" = perception of light.
" "	40	. . .	" = $\frac{6}{24}$
" "	45	. . .	" = $\frac{6}{12}$

In two cases the scoop was used, in neither of which was any vitreous lost. Secondary operations for capsular obstruction were done in four instances with much improvement of vision, and nine patients are to return for a similar operation. Iritis occurred once severely and five times in a very mild form. Three cases were lost: two from panophthalmitis, which began on the third day after operation, and one from the same cause which developed some weeks later.

The foregoing tables give the results of the operation of Græfe, as applied to all varieties of cataract, and shows the wide range of its usefulness and its safety as an operation. To estimate justly, however, its value in simple senile cataract, free from complications, nine of the sixty-nine operations must be omitted, which will give the following vision in sixty cases : —

V. = $\frac{6}{12}$	. . . . .	4	
" = $\frac{6}{18}$	. . . . .	8	
" = $\frac{5}{18}$	. . . . .	1	
" = $\frac{6}{24}$	. . . . .	14	
" = $\frac{3}{12}$	. . . . .	1	
" = $\frac{6}{36}$	. . . . .	16	
" = $\frac{3}{18}$	. . . . .	1	
" = $\frac{3}{24}$	. . . . .	2	
V. = $\frac{6}{60}$	. . . . .	4	
" = $\frac{4}{60}$	. . . . .	2	
" = $\frac{3}{60}$	. . . . .	1	
" = $\frac{2}{60}$	. . . . .	2	
" = light	. . . .	2	
" = 0	. . . . .	2	
		—	
		60	

Success . . .	51	or	85.0 per cent.
Partial success . .	7	"	11.7 " "
Failure . . .	2	"	3.3 " "
	60		100.0

Excessive hemorrhage at the time of operation occurred in seven, and vitreous was lost in four cases. The scoop to assist in the extraction of the lens was used twice. Iritis of not a severe type followed in five cases, and a capsular operation was required in nine instances, in three of which it was performed.

The following tables present a comparative statement of the vision of the thirty-six cases done without any anæsthetic, and of the thirty-three done under the influence of sulphuric ether. The numbers are nearly equal, and there has been no selection of cases, the surgeons preferring one or the other method through all variety of cases. Of the thirty-six cases without ether, eserine has been instilled in thirty-two; and in the thirty-three *with* ether it has been instilled in three instances.

OPERATIONS WITHOUT ETHER.		OPERATIONS WITH ETHER.	
Vision $\frac{6}{12}$	3	Vision $\frac{6}{6}$	1
" $\frac{6}{18}$	4	" $\frac{6}{12}$	2
" $\frac{5}{18}$	1	" $\frac{6}{18}$	4
" $\frac{6}{24}$	9	" $\frac{6}{24}$	7
" $\frac{6}{36}$	9	" $\frac{3}{12}$	1
" $\frac{3}{18}$	1	" $\frac{6}{36}$	7
" $\frac{3}{24}$	1	" $\frac{3}{24}$	2
" $\frac{6}{60}$	2	" $\frac{6}{60}$	3
" $\frac{4}{60}$	2	" $\frac{2}{60}$	2
" $\frac{3}{60}$	1	" Perception of Light	2
" $\frac{1.5}{36}$	1	" 0	2
" Perception of Light	1		33
" 0	1		
	36		

Taking, as stated before, one tenth as good vision, we have the following comparative statement: —

36 Cases without Ether.	No.	Per cent	33 Cases with Ether.	No.	Per cent.
Good Vision . .	30	83.3	Good Vision . . .	27	81 8
Partial Success .	5	13.9	Partial Success .	4	12.2
Failure	1	2 8	Failure	2	6.0
	36	100 0		33	100 0

This table, as is seen, gives a slightly higher average of success to the operation done *without* ether. Two years ago the reverse was the case.

Vitreous was lost without ether five times; with ether once. Secondary operations were needed, six times without ether, and seven times with ether. The scoop was used once in each method; iritis followed two times without ether, and four times with ether. Hemorrhage at the time of operation, into the anterior chamber, of rather more than the usual amount, occurred about the same number of times in each method, and does not appear to be necessarily the result of anæsthesia with sulphuric ether.

Whether one method gives better results than the other cannot at present be determined; a sufficient number of cases not having been obtained for comparison on a large scale, which alone would justify a positive deduction. Thus far there has been very little difference any year in the resulting vision which has been obtained, in the accidents of the operation, or in the complications which arise during the healing process.

The operation of suction has been performed twelve times upon the following varieties of cataract: —

Traumatic	8
Congenital	1
Soft	3
	12

The average stay of the patients in the house has been nineteen days. Six operations have been done on patients under twelve years of age, and six on those over twenty years of age. The following table presents the results of the vision : —

Vision $\frac{6}{6}$	1	Vision $\frac{3}{60}$	2
" $\frac{6}{12}$	1	" $\frac{2}{60}$	1
" $\frac{6}{18}$	2		
" $\frac{6}{36}$	4	Total	12
" $\frac{3}{36}$	1		

Appended are the tables.

STATISTICS OF CATARACT OPERATIONS PERFORMED AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY, FROM OCTOBER 1, 1879, TO OCTOBER 1, 1880.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
1	F. 77 Am.	Good.	Senile. Hypermature.	Projection up and in doubtful.	Oct. 1, 1879. O. S. Græfe up. Ether. Healing of cut slow.	18 days.	May 23, 1880 V. O. S.= $\frac{6}{36}$ c + 8 D.
2	F. 48 Am.	Fair.	Hypermature. 8 years.	Normal.	Oct. 7, 1879. O. D. Græfe up. Ether. Mild form of iritis. Capsule in pupil. Secondary operation required.	17 days.	Oct. 24, 1879. V. O. D.= $\frac{3}{24}$ c + 11 D.
3	F. 52 Irish.	Fair.	Senile. 6 years.	Normal.	Oct. 10, 1879. O. D. Græfe up. Ether. Suppuration without pain or known cause began on third day. Operation without accident.	10 days.	V=0.
4	F. 18 Am.	Good.	Soft. 4 years.	Normal.	Oct. 14, 1879. O. D. Græfe up. Ether. Capsule in pupil. Secondary operation advised.	10 days.	Oct. 24. 1879. V. O. D.= $\frac{6}{60}$ c + 10 D.
5	F. 60 Am.	Good.	Senile. 2 years.	Normal.	Oct. 21, 1879. O. S. Græfe up. Ether.	18 days.	Nov. 8. 1879. V. O. S.= $\frac{6}{24}$
6	M. 74 Am.	Good.	Senile. 3 years.	Normal.	Oct. 31, 1879. O. S. Græfe up. No anæsthetic used. Muco-purulent discharge fifth to eighth day.	14 days.	Nov. 19, 1879. V. O. S.= $\frac{6}{24}$ c + 10 D.

7	F. 78 Irish.	Good.	Senile. Hard. 2 years.	Good, except at inner third.	Nov. 5, 1879. O. S. Græfe up No anæsthetic used. Eserine instilled before operation. Lens large; emerged with difficulty. Eighth day eye opened. Some blood in pupil. Duboisin instilled	18 days.	May 3, 1880. V. O. S.=$\frac{3}{18}$ c + 11 D.
8	F. 73 Am.	Fair.	Senile.	Normal.	Nov. 8, 1879. O. S. Græfe up. No anæsthetic used. Eserine. Brows overhanging, rendering operation difficult.	16 days.	Nov. 24, 1879. V. O. S.=$\frac{4}{60}$ c + 11 D.
9	F. 65 Irish.	Good.	Senile.	Normal.	Nov. 13, 1879. O. D. Græfe up. No anæsthetic used. Eserine. Capsule left in pupil. Vitreous presented, but did not escape. Fifth to eighth day, pain; œdema of lids; chemosis. Atropine; leeches.	16 days.	Nov. 29, 1879. V. O. D.=$\frac{6}{24}$ c + 10 D.
10	M. 77 Am.	Good.	Senile. 2 years.	Projection very imperfect.	Nov. 16, 1879. O. S. Græfe up. No anæsthetic used. Eserine. Healed well. At discharge, retinal separation outwards with entire failure of projection inwards was found.	18 days.	Dec. 4. 1879. V. O. S.=$\frac{1.5}{30}$ c + 12 D.
11	M. 63 Irish.	Good.	Senile. 2 years.	Normal.	Nov. 19, 1879. O. S. Græfe up. Ether. Eye deeply set; considerable hemorrhage into anterior chamber; nucleus large.	13 days.	Dec. 23, 1879. V. O. S.=$\frac{3}{12}$ c + 11 D.
12	M. 65 Ir.-Am.	Fair.	Hard. 6 years.	Normal.	Nov. 26, 1879. O. D. Græfe up. No anæsthetic used. Eserine. Pupil partially blocked with capsule. March 10, 1880, Agnew's hook operation done.	14 days	Mar. 23, 1880. V. O. D.=$\frac{6}{12}$ c + 11 D.

No.	Sex, Age, Nationality.	General Health.	Charaeter and Duration of Cataraet.	Funetional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Proeess. Remarks.	Duration of Treatment.	Resulting Vision.
13	F. 68 Am.	Fair.	Senile. 1 year.	Normal.	Dec. 3, 1879. O. D. Græfe up. No anæsthetic used. Eserine Bleeding excessive during operation; has thin film of capsule at lower edge of pupil.	17 days.	Jan. 29, 1880. V. O. D.=$\frac{6}{24}$ c. cyl. glass.
14	M. 64 Irish.	Fair.	Senile. 4 years.	Normal.	Dec. 4, 1879. O. S Græfe up. Ether. Vitreous appeared at completion of cut; hemorrhage excessive; lens became dislocated, and was removed with scoop. Patient found to be insane; recovered, with pupil blocked with capsule. Secondary operation, Jan. 7, 1880.	86 days.	March 1, 1880. V. O. S.=$\frac{6}{24}$ c + 12 D.
15	F. 71 Am.	Good.	Senile. 3 years.	Normal.	Dec. 4, 1879. O. S. Græfe up. Ether. Nucleus large; cut small, enlarged with scissors; healed slowly; considerable conjunctivitis ; capsule in pupil. Secondary operation required.	37 days.	V. good, but no exact record.
16	F. 58 Welsh.	Fair.	Senile. 3 years.	Normal.	Dec. 4. 1879. O. D. Græfe up. Ether. Much vomiting from ether; free hemorrhage during operation; mild iritis. June 17, 1880. Secondary operation.	67 days.	V. O. D.=$\frac{6}{12}$ c + 17 D.
17	M. 65 Irish.	Fair.	Senile. Hypermature.	Normal.	Dec. 7, 1879. O S. Græfe up. No anæsthetic used. Eserine. Eighth to twentieth day acute catarrh of eye; iris slightly adherent to inner end of section.	30 days.	Jan. 7, 1880. V. O. S.=$\frac{6}{24}$ c + 11 D.

18	F. 65 Irish.	Fair.	Senile. 3 years.	Normal.	Dec. 28, 1879. O. S. Græfe up. Ether. Eserine.	20 days.	Jan. 17, 1880. V. O. S.=$\frac{6}{24}$ c + 11 D.
19	M. 67 Irish.	Fair.	Senile. 1 year.	Fair.	Dec. 31, 1879. O. S. Græfe up. No anæsthetic used. Eserine. Free hemorrhage during operation. Patient controlled with difficulty.	25 days.	Jan. 25, 1880. V. O. S.=$\frac{6}{18}$ c + 14 D.
20	F. 72 Am.	Good.	Senile.	Projection normal Has lachrymal obstruction.	Jan. 3, 1880. O. S. Græfe up. Ether. Healed well; no trouble from lachrymal discharge.	20 days.	Jan. 23, 1880. V. O. S.=$\frac{6}{24}$ c + 11 D.
21	M. 65 Irish.	Fair.	Senile.	Normal.	Jan. 7, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	28 days.	Feb. 4, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D.
22	M. 61 Irish.	Good.	Senile. 2 years.	Normal.	Jan. 18, 1880. O. S. Græfe up. No anæsthetic used. Eserine. Patient restless; considerable vitreous lost. Feb. 22. Secondary operation done for capsular obstruction.	20 days.	July 10, 1880. V. O. S.=$\frac{3}{24}$ c + cyl. glass.
23	M. 63 Eng.	Good.	Senile. Hypermature. 13 years.	Normal.	Jan. 22, 1880. O. D. Græfe up. Ether. Vitreous lost in considerable amount; wound closed only on twentieth day. June 16 1880. Secondary operation for capsular obstruction.	40 days.	V. O. D.=$\frac{2}{60}$ c + 13 D.
24	M. 67 Irish.	Fair.	Senile.	Normal.	Jan. 25, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	17 days.	Feb. 26, 1880 V. O. D.=$\frac{6}{24}$ c + 13 D.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
25	F. 63 Am.	Good.	Senile. 5 years.	Normal.	Feb. 4, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	18 days.	Feb 22, 1880. V. O. D.=$\frac{6}{12}$ c + 11 D.
26	F. 66 Scotch.	Good.	Senile.	Moderately good.	Feb. 6, 1880. O. D. Græfe up. No anæsthetic used. Eserine. Patient became insane and was discharged on the eighteenth day. Capsular obstruction in pupil.	18 days.	Feb. 21, 1880. V. O. D.=$\frac{4}{60}$ c + 11 D.
27	F. 68 Irish.	Good.	Senile.	Normal.	Feb 27, 1880. O. S. Græfe up. No anæsthetic used. Eserine. Considerable loss of vitreous, which was quite fluid. Pain set in a few hours after operation. Fourth day plastic iritis; abated on twelfth day. Dense capsular obstruction in pupil, requiring secondary operation.	24 days.	Mar. 20. 1880. Good perception of light.
28	F. 65 Irish.	Good.	Senile. 1 year.	Partial failure of projection downwards.	March 3, 1880. O. S. Græfe up. No anæsthetic used. Eserine Much capsule left in pupil. Operation followed by pain; swelling of lids. Eye opened on 10th; pupil drawn up, blocked with capsule. 11th, anterior chamber one third filled with blood.	17 days.	Mar. 20. 1880. V. O. S.=$\frac{3}{60}$

29	M. 62 Irish.	Good.	Senile. 2 years.	Normal.	March 10, 1880. O. S. Græfe up. No anæsthetic used. Eserine.	12 days.	Mar. 22, 1880. V. O. S.=$\frac{6}{36}$ c + 9 D.
30	M. 59 Am.	Good.	Senile. 2 years.	Normal.	March 12, 1880. O. S. Græfe up. Ether. Healed with slight tag of iris in wound; some capsule in pupil.	33 days.	April 14, 1880. V. O. S.=$\frac{6}{60}$ c + 11 D.
31	F. 58 Irish.	Good.	Senile. 4 years.	Normal.	March 20, 1880. O. S. Græfe up. No anæsthetic used. Eserine. Severe pain came on soon after discharge, followed by panophthalmitis and atrophy of globe.	15 days.	V.=O.
32	F. 63 Am.	Poor.	Senile. 5 years.	Normal.	March 24, 1880. O. S Græfe up. No anæsthetic used. Eserine. Some bleeding into anterior chamber after operation.	29 days.	April 29, 1880. V. O. S.=$\frac{6}{36}$ c + 11 D. and slit.
33	M. 63 Irish.	Good.	Senile.	Normal.	March 22, 1880. O.D Græfe up. Ether. Patient kept longer, on account of irritable pterygium.	29 days.	April 20 1880. V. O. D.=$\frac{6}{24}$ c + 11 D.
34	F. 56 Am.	Good.	Senile. 7 years.	Normal.	March 25, 1880. O. S. Græfe up. Ether.	15 days.	April 9, 1880. V. O. S.=$\frac{6}{18}$ c + 11 D.
35	M. 68 Am	Good.	Senile. 3 years.	Normal.	April 8, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	13 days.	April 21, 1880. V. O. D.=$\frac{6}{24}$ c + 11 D.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
36	M. 69 Am.	Good.	Senile. 5 years.	Normal.	April 9, 1880. O. D. Græfe up. Ether. Slight traumatic iritis followed.	40 days.	May 19, 1880. V. O. D.=$\frac{6}{60}$ c + 11 D.
37	F. 64 Am.	Good.	Senile. 2 years.	Normal.	April 10, 1880. O. S. Græfe up. Ether.	23 days.	May 3, 1880. V. O. S.=$\frac{6}{18}$ c + 12 D.
38	F. 63 Am.	Poor.	Senile. 3 years.	Normal.	April 14, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	11 days.	April 29, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D. and slit.
39	F. 56 Am.	Good.	Senile. 5 years.	Normal.	April 14, 1880. O. S. Græfe up. Ether. Sixth day patient struck eye, causing congestion.	30 days.	May 14, 1880. V. O. S.=$\frac{6}{36}$ c + 8 D. and slit.
40	F. 73 Am.	Good.	Senile. 2 years.	Projection failed inwards.	April 24, 1880. O. D. Græfe up. No anæsthetic used. Vitreous presented while iris was grasped; quite fluid, and considerable escaped; eye healed without marked symptoms; pupil partially obstructed with capsule.	45 days.	June 7, 1880. V. O. D.=$\frac{6}{60}$ c + 11 D.
41	F. 52 Irish.	Good.	Senile. 2 years.	Normal.	April 24, 1880. O. S. Græfe up. No anæsthetic used. Eserine.	11 days.	June 28, 1880. V. O. S.=$\frac{6}{18}$ c + 5 D.

42	F. 76 Am.	Poor.	Senile. 8 years.	Normal.	May 9, 1880. O. D. Græfe up. No anæsthetic used. Eserine. May 17. Iris in wound at one corner.	14 days.	May 23, 1880. V. O. D.=$\frac{6}{24}$ c + 11 D.
43	M. 51 Am.	Fair.	Senile. 3 years.	Projection fails at inner third of field.	May 12, 1880. O. S. Græfe up. No anæsthetic used. Eserine.	14 days.	July 7, 1880. V. O. S.=$\frac{6}{36}$ c + 12 D.
44	F. 52 Br.-Am	Fair.	Senile. 5 years.	Normal.	May 7, 1880. O. S. Græfe up. No anæsthetic used. Eye healed slowly.	23 days.	May 29, 1880. V. O. S.=$\frac{6}{60}$ c + 14 D.
45	F. 39 Am.	Good.	8 years. Hard.	Projection normal; eye divergent; lachrymal catarrh.	May 13, 1880. O. S. Græfe up. No anæ thetic used. Eserine. Opaque capsule removed; slight loss of vitreous; considerable capsule in pupil at time of discharge.	17 days.	July 21, 1880. V. O. S.=$\frac{6}{12}$ c + 11 D.
46	F. 70 Irish.	Good.	Senile. 3 years.	Normal	May 16, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	14 days.	May 30, 1880. V. O. D.=$\frac{6}{18}$ c + 11 D. and slit.
47	M. 52 Am.	Very poor. Asthm'tic.	Senile. 2 years.	Normal.	May 18, 1880. O. D. Græfe up. Ether. Frequent attacks of asthma while under treatment.	22 days.	June 10. 1880. V. O. D.=$\frac{6}{12}$ c + 10 D.
48	M. 72 Br.-Am.	Good.	Senile. Hypermature. 8 years.	Normal.	May 29, 1880. O. D. Græfe up. No anæsthetic used. Eserine. Scoop used twice; lens large and adherent to capsule; much opaque capsule removed; no vitreous lost.	13 days.	June 11, 1880. V. O. D =$\frac{6}{36}$ c + 10 D.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
49	M. 62 Eng.	Good.	Senile. 3 years.	Normal.	June 3, 1880. O. D. Græfe up. Ether. Cut small; enlarged with scissors; free hemorrhage throughout operation. Healed slowly. Seventh day, some blood in anterior chamber.	43 days.	July 16, 1880. V. O. D.=$\frac{6}{18}$ c + 11 D.
50	M. 71 Am.	Good.	Senile. 2 years.	Normal.	June 6, 1880. O. D. Græfe up No anæsthetic used. Eserine. Two thirds of lens substance fluid. Nucleus small and hard.	20 days.	June 26, 1880. V. O. D.=$\frac{6}{24}$ c + 10 D.
51	M. 80 Am.	Good.	Senile.	Projection fails at inner third of field.	June 12, 1880. O. D. Græfe up. Ether. Eserine.	21 days.	July 3, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D
52	M. 72 Am.	Fair.	Senile. Hypermature.	Failure of projection through two thirds of field. Operation not advised, but done at patient's request.	June 17, 1880. O. D. Græfe up. Ether.	16 days.	July 3, 1880. V. O. D =$\frac{3}{24}$ c + 11 D.
53	F 70 Am.	Fair.	Senile. 2 years.	Normal.	June 23, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	16 days.	July 9, 1880. V. O. D.=$\frac{5}{18}$ c + 10 D.

54	F. 60 Irish.	Fair.	Senile. 2 years.	Normal.	June 23, 1880. O. D Græfe up. Ether. Operation normal, followed by slight iritis.	31 days.	July 24, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D.
55	M. 62 English.	Good.	Senile. 3 years.	Normal.	July 17, 1880. O. S. Græfe up. Ether. Free hemorrhage during operation.	31 days.	Aug. 17, 1880. V. O S.=$\frac{6}{24}$ c + 11 D.
56	F. 75 Irish.	Fair.	Senile. 3 years.	Normal.	July 21, 1880. O. D. Græfe up. No anæsthetic used. Cut small; enlarged with scissors. Very free hemorrhage during operation.	18 days.	Aug 8, 1880. V. O. D.=$\frac{6}{24}$ c + 12 D.
57	M. 58 Am.	Good.	Senile. 2 years.	Normal.	July 22, 1880. O. S. Græfe up. No anæsthetic used.	16 days.	Aug. 7, 1880. V. O. S.=$\frac{6}{18}$ c + 11 D.
58	M. 62 Irish.	Poor.	Post. polar. 2 years.	Normal.	Aug. 10, 1880. O. D. Græfe up. Ether. Eserine. Operation normal. Iritis set in a day or two after operation. Patient recovered with closed pupil, and partially opaque cornea.	47 days.	Sept. 27, 1880. V. O. D.=perception of light.
59	M. 62 Irish.	Good.	Senile. 3 years.	Normal.	Aug. 10, 1880. O. D. Græfe up. No anæsthetic used. Eserine.	20 days.	Aug. 30. 1880. V. O. D.=$\frac{6}{36}$ c + 11 D.
60	M. 56 Irish.	Fair.	Senile. 3 years.	Normal.	Aug. 10, 1880. O. S. Græfe up. No anæsthetic used. Eserine. Operation followed by a mild form of iritis.	25 days.	Sept. 4, 1880. V. O. S.=$\frac{6}{36}$ c + 10 D.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
61	M. 24 Irish.	Good.	Soft. 1 year.	Normal.	Sept. 4, 1880. O. D. Græfe up. Ether. Atropine instilled third day.	13 days.	Sept. 17, 1880. V. O. D.=$\frac{6}{6}$ c + 11 D.
62	F. 62 Irish.	Good.	Senile. Hypermature. 10 years.	Normal.	Sept. 6, 1880. O. D. Græfe up. Ether. Conjunctival sac washed out before operation with a 4% sol. of boracic acid. Vitreous very fluid; some escaped. Suture placed in conjunctival flat.	15 days.	Oct. 18. 1880. V. O. D.=$\frac{6}{36}$ c + 8 D.
63	M. 70 Am.	Poor.	Senile.	Normal projection; old choroidal trouble.	Sept. 9, 1880. O. D. Græfe up. Ether. Suppuration set in on third day.	21 days.	V. = O.
64	M. 40 Irish.	Poor.	Traumatic. 8 weeks.	Normal.	Sept. 10, 1880. O. S. Græfe up. Ether. Lens soft, and came out without the use of cystitome. Atropine instilled third day.	18 days.	Sept. 28, 1880. V. O. S.=$\frac{6}{24}$ c + 11 D.
65	F. 50 Am.	Fair.	Hard.	Normal.	Sept. 20, 1880. O. S. Græfe up. No anæsthetic used. Cortical fluid; nucleus small. Boracic acid 4% used before operation in conjunctival sac.	10 days.	Oct. 25, 1880. V. O. S.=$\frac{6}{36}$ c + 10 D.
66	F. 55 Irish.	Poor.	Senile. 4 years.	Normal.	Sept. 21, 1880. O. S. Græfe up. Ether. Patient very restless; wound not healed until after sixth day; capsule in pupil. Secondary operation necessary.	29 days.	V. O. S.=$\frac{2}{60}$

67	F. 62 Irish.	Good.	Senile. 4 years.	Normal.	Sept. 22, 1880. O. S. Græfe up. Ether. Boracic acid 4% to conjunctival sac before operation.	15 days.	Oct. 18, 1880. V. O. S.=$\frac{6}{36}$ c + 8 D.
68	M. 79 Am.	Poor.	Senile. Hypermature. 15 years.	Normal.	Sept. 28, 1880. O.D. Græfe up. Ether. Healed well. Capsule in pupil.	25 days.	Oct. 22, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D.
69	M. 54 Irish.	Good.	Hypermature. 12 years.	Normal.	Sept. 29, 1880. O. S. Græfe up. Ether.	23 days.	Oct. 22, 1880. V. O. S.=$\frac{6}{18}$ c + 11 D.

SUCTION OPERATIONS.

1	M. 6	Good.	Traumatic. 2 weeks.		Dec 4, 1879. O. D. Suction. Ether. Some opaque capsule in pupil.	20 days.	Dec. 24, 1879. V. O. D.=$\frac{6}{36}$ c + 11 D.
2	M. 25 Am.	Poor. Chronic articular rheumatism and old syphilis.	Traumatic. 12 years.	Fair. O. D. diverges. Posterior synechia.	Jan 8, 1880. O. D. Suction and extraction. Ether. Considerable fluid corticalis removed by suction; wound enlarged, and a small, hard nucleus removed; vitreous fluid, and considerable lost. Seventh day, iritis. Feb. 11, secondary operation for capsular obstruction.	78 days.	Mar. 27, 1880. V. O. D.=$\frac{6}{36}$ c + 11 D.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date. Operation. Anæsthesia. Course of Healing Process. Remarks.	Duration of Treatment.	Resulting Vision.
3	M. 30	Good.	Traumatic. 3 months.	Fair.	Jan. 15, 1880. O. S Suction. Ether. Some capsule in upper part of pupil.	13 days.	Jan. 28, 1880. V. O. S.=$\frac{3}{60}$ c + 11 D.
4	M. 44 Irish.	Fair.	Traumatic. 14 years.	Normal.	Jan 17, 1880. O. D. Suction. Ether. Nine days after operation a mass of cortical with an opaque spot on it found floating about in anterior chamber. This (Jan. 27) was removed by suction. The opaque spot was probably a foreign body.	26 days.	Feb 11, 1880. V. O. D.=$\frac{6}{12}$ c + 11 D.
5	M. 8 Br.-Am.	Good.	Traumatic. 3 months.	Normal.	Jan. 22, 1880. O. D. Suction. Ether.	9 days.	V. O. D.=$\frac{6}{36}$ c + 11 D.
6	F. 20	Good.	Many years.		Feb. 12, 1880 O. S. Suction. Ether.	32 days.	V. O. S.=$\frac{2}{60}$ without glass.
7	M. 25	Good.	Traumatic.	Projection good. Ant. synechiæ.	Feb. 19, 1880. O. S. Suction. No anæsthetic used.	28 days.	May 16. 1880. V. O. S.=$\frac{6}{6}$ c + 11 D.
8	M. 8 Am.	Good.	Congenital. Thickened capsule.	Normal.	March 27, 1880. O. S. Suction. Ether.	1 day.	Mar. 28, 1880. V. O. S =$\frac{6}{36}$ c + 11 D

9	M. 11 Br.-Am.	Good.	Soft. 7 years.	Normal.	June 9, 1880. O. D. Suction. Ether.	5 days.	June 14, 1880. V. O. D. = $\frac{6}{18}$ c + 12 D.
10	M. 11 Br.-Am.	Good.	Soft. 7 years.	Normal.	June 9, 1880. O. S. Suction. Ether.	5 days.	June 14, 1880. V. O. S. = $\frac{6}{18}$ c + 12 D.
11	F. 8 Am.	Good.	Traumatic.		June 30, 1880 O. D. Suction. Ether.	5 days.	V. O. D. = $\frac{3}{36}$ c + 11 D.
12	M. 38 Scotch.	Good.	Traumatic. 7 days.	Normal.	Aug. 31, 1880. O. S. Suction. Ether.	6 days.	Sept 6, 1880. V. O. S. = $\frac{3}{60}$ c + 11 D.



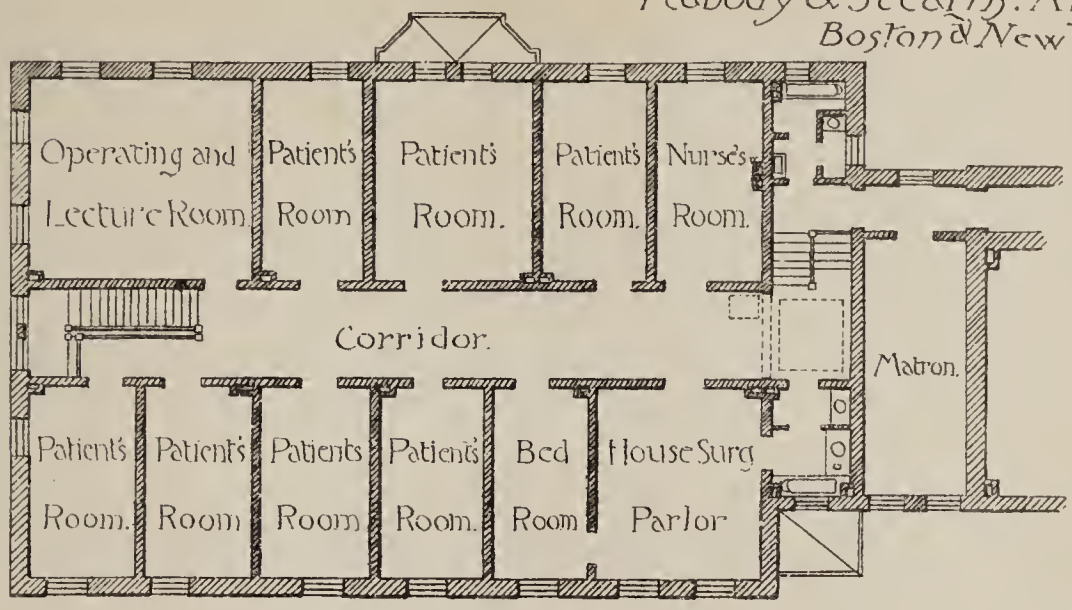
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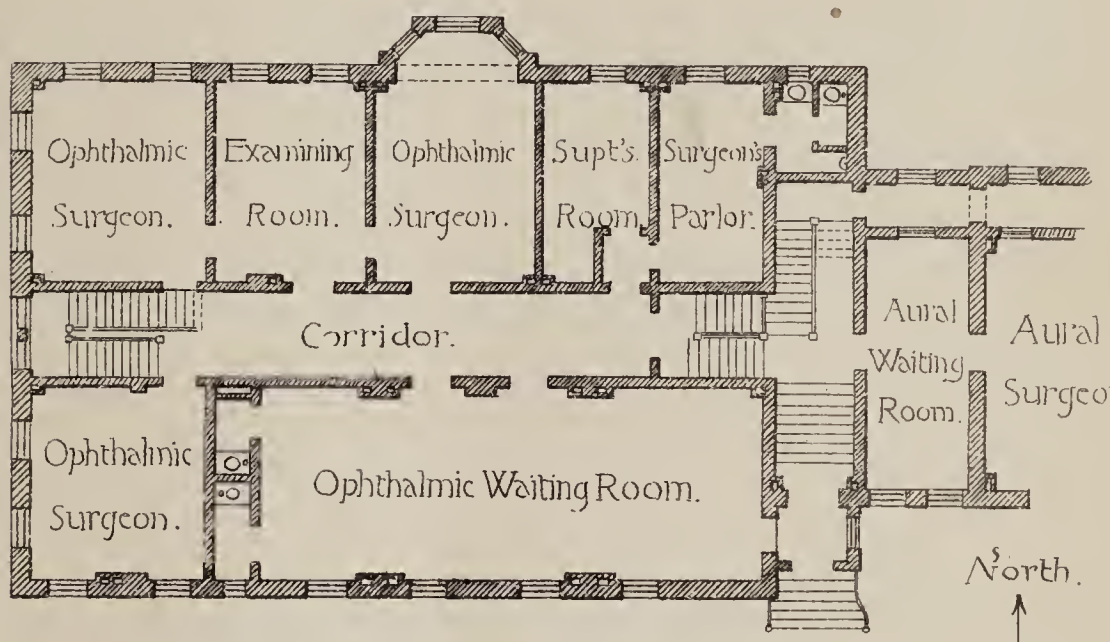
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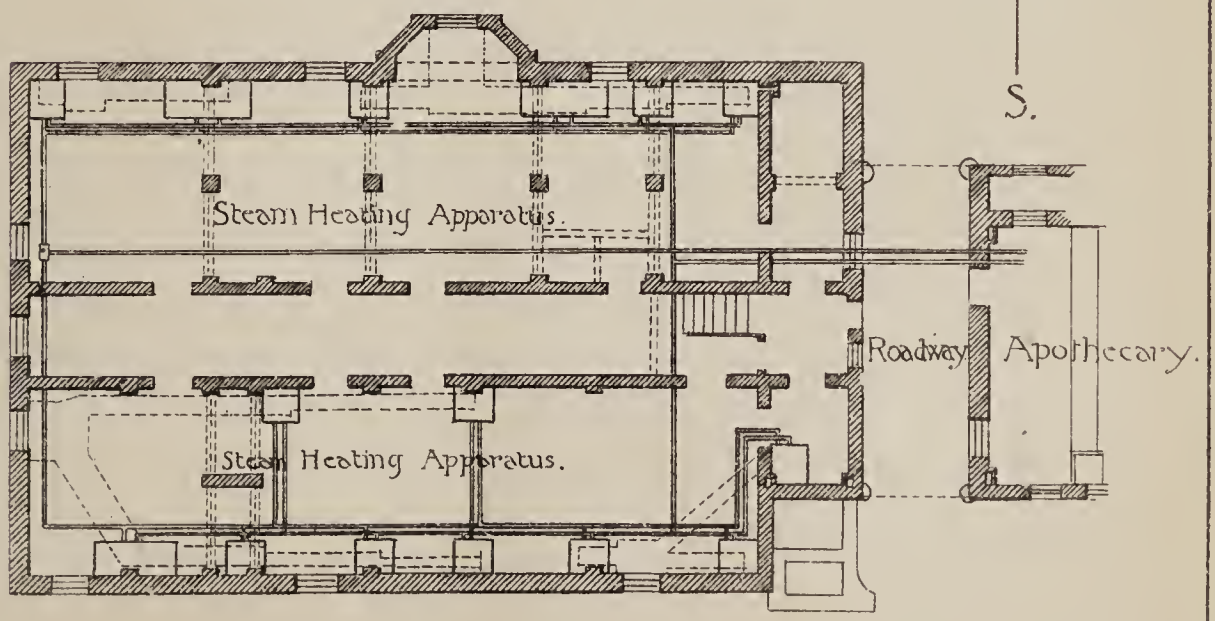
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FIFTY-SIXTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1881.

BOSTON:

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34 School Street.

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1881-82.

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REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1881.

In behalf of the managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the report of the surgeons for the year ending Sept. 30, 1881.

The year has been one of unusual interest in the history of the Infirmary, marked as it has been by the completion of the new wing, which filled a long-existing need, and rendered it possible for the surgeons in charge to perform their duties in a thoroughly satisfactory manner.

We have been disappointed at the want of interest shown by the public and manifested in their slender contributions during the year; the Commonwealth, on the other hand, has responded to our appeal for assistance with a generous gift of five thousand dollars for our new building, which it would have been impossible for us to complete otherwise, without trenching greatly on our resources.

The total cost of the building, heating apparatus, and furniture has been		$34,112 05
Private donations . . .	$24,595 00	
Public donation . . .	5,000 00	
Interest	1,641 75	
		31,236 75

leaving a deficiency of $2,875.30 which must be provided for from the general funds of the Infirmary, already far too small to meet our current expenses.

There seems to be a general impression that the Infirmary is a State institution, and consequently needs no help. This is a mistake; the Commonwealth has always lent us her assistance, but the charity is a private one, and depends largely on the benevolent public for its support.

From the treasurer's report, we learn that the available income for the fiscal year was . . .	$15,527 89
(including a donation from the State of $10,000).	
The running expenses were . . .	17,937 14
Excess of expenditures over receipts . .	$2,409 25

and we cannot expect our annual expenses to be less in the future.

A small increase of our income may be looked for eventually from bequests now burdened with life annuities; but these will not lapse for many years, and even then will be wholly inadequate to cover our deficiency.

Under these circumstances, it is imperative for us to appeal to the public for aid in order that this worthy charity may not falter in its work.

The number of out-patients treated at the Infirmary has increased from 9,390 to 10,082, the house patients from 476 to 486; these latter figures do not measure our true increase, since the addition to the number of beds has only been available for a few months.

The accompanying heliotypes will show the excellent addition to the Infirmary; but work connected with the modern conveniences of water for bathing and other purposes, as well as for a thorough system of drainage, still remains to be done, our finances not warranting further outlay.

In presenting this statement, we desire to acknowledge thankfully the gifts we have received, and to express the hope that the Infirmary will not be overlooked the coming year, but that its usefulness will be more fully recognized and its needs amply provided for.

FRANKLIN H. STORY.
THOMAS B. CURTIS.
AUGUSTUS HEMENWAY.

Since the above report was written, the Board of Managers have to note the sudden deaths, within one week, of two of their number, the Honorable Harvey Jewell and Thomas B. Curtis, M. D.

In the elder, they have lost the ripe judgment and ever-ready advice of the accomplished jurist; in the younger, the willing help of the present and the rich promise of the future.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen, — The annual report for the year ending Sept. 30, 1881, is hereby presented.

The new wing, having been completed during the present Infirmary year, has been used for the reception of out-patients since November last, and the rooms in the upper story have been occupied since last spring. It would be difficult to exaggerate the importance of the step taken by the managers in the carrying out of this much-needed improvement; a step that has largely relieved the Infirmary from the drawbacks incident to an old-fashioned edifice, adapted to a limited number of patients, and enabled it to take its stand in the front rank of modern institutions. The surgeons desire to evince their appreciation of the fact that additional facilities for the reception, examination, and treatment of patients have now been placed at their disposal, and to congratulate all interested in the progress of this important charity, at its prospect of usefulness in the future.

The increase in the number of patients treated has been 702, as compared with 307 in 1880, and brings the total number of cases to 10,568 the present year. It is thought that very few obtain advice or treatment, save those whose circumstances legitimately entitle them to the same. Notwithstanding the notices, liberally distributed about the building, that the Infirmary is intended solely for those too poor to con-

sult the private practitioner, a certain number of well-to-do people succeed each year in imposing themselves upon the clinique. The most careful questioning fails to detect them, and it is only accident that subsequently discovers their real character. It has been suggested that a list of the names of such individuals might be formed.

The labors of the surgeons, during the past year, have been materially lightened by the ready co-operation of the assistant surgeons, particularly during the summer months. Of the services of the ophthalmic interne, and the various externes, it is only necessary to say that they continue to be as valuable as indispensable. The enlargement of the building has entailed much additional labor, and thrown increased responsibility on both the superintendent and the matron, to each of whom the institution is much indebted.

The usual list of diseases, and an analysis of some of the more important operations, are appended.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

Boston, Sept. 30, 1881.

STATISTICS.

October 1, 1880, to October 1, 1881.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	281
Females	205
	486

Out-Patients.

Whole number of eye patients	7,317
Whole number of ear patients	2,765
Total eye and ear patients	10,082

Residents of Boston	5,441
" other parts of Massachusetts	4,220
" Maine	165
" New Hampshire	123
" Vermont	33
" Rhode Island	28
" Connecticut	12
" other States	26
" British Provinces and foreign countries	30
Unrecorded	4
	10,082

Eye patients: —		
Males	3,614	
Females	3,703	
		7,317
Ear patients: —		
Males	1,422	
Females	1,343	
		2,765
Total		10,082

Diseases of the Eye.

Lids.

Blepharadenitis	367
Lippitudo	4
Hordeolum	71
Ectropium	5
Entropium	6
Trichiasis	36
Anchyloblepharon	2
Symblepharon	10
Œdema	23
Eczema	13
Abscess	40
Chalazion	126
Cyst	16
Verruca	3
Tumor	11
Nævus	2
Ptosis	7
Epithelioma	7
Xanthelasma	1
Herpes	2
	752

Conjunctiva.

Conjunctivitis, catarrhal	1,069
" blenorrhoic	33
" " neonatorum	34
" granular	197
" " with pannus	71
" " phlyctenular	327
" traumatic	31
Ophthalmia, gonorrhœal	2
Chemosis	6
Ecchymosis	40
Pterygium	54
Pinguecula	6
Foreign body on	62
	1,932

Cornea and Sclera.

Keratitis	226
" interstitial	71
" traumatic	18
Kerato-iritis	18
Ulcer of cornea	477
" " vascular	46
" " traumatic	18
Abscess of cornea	5
Abrasion "	31
Rupture "	12
Staphyloma anterior	20
Keratoconus	3
Foreign body on cornea	566
Herpes zoster	2
Leucoma	150
Foreign body on sclera	7

Sclero-keratitis	2
Episcleritis	9
Scleritis	22
	1,641

Iris and Ciliary Body.

Iritis, rheumatic	143
" syphilitic	17
" traumatic	6
Prolapse of iris	10
Coloboma	1
Dialysis	2
Mydriasis	11
Myosis	4
Posterior synechiæ	25
Anterior synechiæ	10
Irido-cyclitis	2
Wound of ciliary body	4
	235

Choroid.

Choroiditis	99
Posterior staphyloma	29
Sclerotico-choroiditis posterior	16
Irido-choroiditis	8
" " sympathetic	9
Glaucoma	14
	175

Retina.

Retinitis	6
" albuminurica	2
" apoplectica	12
" pigmentosa	3

Neuro-retinitis	12
Separation of retina	15
Disease of macula lutea	3
	53

Optic Nerve.

Neuritis	10
Atrophy	71
	81

Vitreous.

Opacities	16
Hemorrhage	8
	24

Lens.

Cataract, hard and soft	169
" incipient	85
" congenital	7
" traumatic	49
" capsular	5
" posterior polar	1
Dislocation of lens	18
	334

Lesions of Globe and Orbit.

Hydrophthalmus	1
Exophthalmus	6
Microphthalmus	2
Phthisis bulbi	48
Intraocular tumor	1
Rupture of globe	3
Foreign body in anterior chamber	3
" " " eyeball	6
	70

Affections of Percipient Apparatus.

Amblyopia	66
Hemeralopia	3
Amblyopia ex abusu	27
Muscæ volitantes	18
Scotoma	6
	120

Refraction and Accommodation.

Myopia	151
Hypermetropia	339
Astigmatism	153
Presbyopia	75
Asthenopia	124
	842

Muscular Affections and Neuroses.

Paralysis of facial	2
" third pair	8
" fourth "	1
" sixth "	2
Diplopia	7
Strabismus convergens	112
" divergens	26
Ciliary neuralgia	8
" spasm	1
Insufficiency of internal recti	13
Blepharospasmus	9
Neuralgia fifth pair	1
" supraorbital	13
	203

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	156
Affections of lachrymal passages	10
Eversion of punctum	6
Abscess of lachrymal sac	62
Lachrymal fistula	3
	236

General Injuries.

Blows and cuts	142
Burns	42
	184
Unfit	387
Unrecorded	202
	589

Recapitulation of Eye Diseases.

Lids	752
Conjunctiva	1,932
Cornea and sclera	1,641
Iris and ciliary body	235
Choroid	175
Retina	53
Optic nerve	81
Vitreous	24
Lens	334
Lesions of globe and orbit	70
Affections of percipient apparatus	120
Refraction and accommodation	842
Muscular affections and neuroses	203
Lachrymal apparatus	236
General injuries	184
Unfit and unrecorded	589
	7,471

Operations on the Eye.

Cataract.

Extraction, method of Græfe, hard cataract	72
" " " traumatic "	4
" " " soft "	4
" " " glaucomatous cataract,	1
" " " post-polar "	1
" " " congenital "	2
Discission	4
Suction	13
Removal of dislocated lens	1
	102

Iridectomy.

For artificial pupil	4
" lamellar cataract	5
" irido-choroiditis	2
" glaucoma	4
" chronic iritis	4
" hydrophthalmus	1
	20

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened,	38
" foreign body in globe	2
" sarcoma	1
" epithelioma	1
	42

Other Operations.

Removal of hernia of iris	6
Pterygium, Desmarres'	5

Peritomy	3
Saemisch's operation for ulcus corneæ serpens	4
Tumor of cornea	1
Paracentesis of cornea	8
Tattooing cornea	1
Excision of anterior staphyloma	4
Removal of foreign body from cornea	555
" " " ant-chamber	1
Foreign body in globe, removed by electro-magnet,	9
Opaque capsule	15
Sclerotomy for glaucoma	4
Strabismus convergens	87
" divergens	3
Entropium	3
Electrolysis of ciliary bulbs	9
Trichiasis, Snellen's operation	1
" Streatfeild's "	2
Removal of ciliary border	6
Ectropium, Wolfe's operation	1
Abscess lachrymal sac	5
Canthoplasty	4
Chalazion	40
Lids, cyst of	4
" epithelioma	2
" plastic of	1
Symblepharon	1
Cyst of orbit	1
Sarcoma "	1
Tumor of conjunctiva	1
Miscellaneous	10
	815

STATISTICAL REPORT OF DISEASES OF THE EAR.

Oct. 1, 1880, to Oct. 1, 1881.

Abscess, auricle and meatus	27
Aspergillus	1
Condyloma, meatus	1
Deaf-mutism	8
Eczema	28
Epithelioma	1
Fibroma, lobe	1
Foreign body, meatus	30
Frost bite	2
Furuncle, meatus	16
Hallucination of hearing	4
Hematoma	3
Hyperostosis in meatus	1
Injury from foreign body, meatus	1
Lupus	1
Malformation, auricle	1
Microtia	3
Otitis externa circumscripta	58
" " diffusa	64
Obstruction of meatus, cerumen	453
Otitis interna	17
" media acuta	205
" " subacuta	74
" " chronica catarrhalis	733
" " purulenta	843
" " " with mastoid abscess	20

Otitis media purulenta, with polypi	49
" " catarrhalis tubalis	24
Otalgia neuralgica	42
Papilloma, auricle	1
Perforation of membrana tympani	1
Rupture " " "	6
Tinnitus aurium	16
Tumor (sebaceous cyst), auricle	1
Ulcer, meatus	1
Unfit	123
Unrecorded	31
Other diseases	31
	2,922

Operations.

Incision for abscess about auricle	2
Incision for abscess *post aurem*, unconnected with disease of middle ear	1
Incision for abscess *post aurem*, with otitis media purulenta	12
Insertion of Politzer's eyelet	1
Removal of fibromata, lobe of auricle	2
" " sebaceous cyst, auricle	1
	19

STATISTICAL REPORT OF SEVENTY-TWO OPERATIONS FOR THE EXTRACTION OF UNCOMPLICATED SENILE CATARACT, BY THE METHOD OF VON GRÆFE.

Performed at the Infirmary by its various surgeons during the year ending Sept. 30, 1881.

COMPILED BY HASKET DERBY, M. D.

From the hundred and two operations for cataract performed during the past year, seventy-two — or perhaps, more strictly speaking, seventy — come under the above heading. Two patients, aged respectively twenty-nine and thirty-five, are included in the following tables. All the others were over forty years of age, their cataracts uncomplicated, and the method of operation comparatively uniform; viz., more or less modified linear extraction. Such statistics alone appear, to the compiler, to possess practical value for purposes of ready reference, and for the determination of vexed questions relating to this department of surgery.

The distribution of sexes was, —

Males	38
Females . . .	34

As regards nationality, —

Americans . . .	33
Foreigners . . .	39

The average age was 61.5 years. The youngest patient operated on was twenty-nine; the oldest eighty-four.

Eserine was instilled, as preparatory to the operation, in eight cases. Twenty-two operations were performed without ether; fifty with. Statistics of comparative success would be given, had these cases occurred in the practice of any one surgeon; but with a variety of operators, the different steps in the operation of extraction must of necessity be differently taken. The use of fixation forceps, for example, is ordinarily continued throughout in most cases where anæsthesia is induced; while with a conscious patient, this

instrument may be discarded after the counter-puncture. It is therefore in the diminished instrumental interference with the eye that one advantage of non-etherization consists. Another is the information with regard to the clearness with which he sees, that may be obtained from the patient subsequent to the operation and prior to the application of the bandage. Unless, therefore, fixation has been laid aside, and vision tested, it cannot be claimed that anything beyond the escaping of nausea is secured by the avoidance of anæsthesia. Other surgeons, however, may and do hold different views on these points from those here presented, which are those entertained by the compiler.

Vitreous was lost in six cases, in four of which ether had been administered.

The results as regards vision were as follows: —

Vision 0.8	1	Counts fingers in 2 metres,	1
" 0.7	3	" " in 75 centi-	
" 0 6	1	metres	1
" 0.5	6	Counts fingers in 15 centi-	
" 0.4	5	metres	1
" 0.3	18	Perception of light	3
" 0.2	17	Total loss	2
" 0.1	10		—
" 0.05	3		72

This gives about 85 per cent of full success (vision 0.1 and over), 2.7 per cent of total loss. Both of the patients in whom the operation proved a failure were violent and uncontrollable. One of them repeatedly tore off the bandage; the other rose and walked the house at night, directly after the operation.

Of the three cases dismissed with perception of light, two were directed to return for a secondary operation. If this be done, they will probably regain useful vision.

It is to be borne in mind that this report is made out within a month of the close of the year it covers; that several of the operations it records had just been performed; and that very many of the patients whose vision is given were examined within a fortnight or three weeks of the operation, and have not since been seen.

STATISTICS OF CATARACT OPERATIONS PERFORMED AT THE MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY, FROM OCTOBER 1, 1880, TO OCTOBER 1, 1881.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Courae of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	F. 52 Am.	Poor.	Senile. 3 years.	Normal.	Oct. 1, 1880. No ether. Græfe up. Slight loss of fluid vitreous. Lens had to be removed with scoop. Pupil not wholly clear at time of discharge. Eye opened on sixth day.	23 days.	0.04
2	F. 50 Am.	Fair.	22 years.	Normal.	Oct. 5, 1880. No ether. Græfe up. Eye opened on sixth day.	10 days.	0 5
3	M. 64 Am.	Good.	Senile. 5 years.	Normal.	Oct. 5, 1880. Ether. Græfe up. Long conjunctival flap; fine suture placed at its apex. Eye opened on sixth day.	13 days.	0.15
4	M. 68 Am.	Good.	Senile. 1 year.	Normal.	Oct. 13, 1880. Ether. Græfe up. Eye opened on seventh day. Some cortical in pupil at time of discharge.	19 days.	0.2
5	F. 69 Am.	Fair.	Senile. 7 years.	Normal.	Oct. 13, 1880. Ether. Græfe up. Eye opened on seventh day.	11 days.	0.25
6	F. 45 Irish.	Good.	Senile. 3 years.	Normal.	Oct. 13, 1880. Ether. Græfe up. Eye opened on seventh day.	10 days.	0.2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
7	F. 65 Irish.	Poor.	Senile. 2 years.	Normal.	Oct 14, 1880. Ether. Græfe up.	25 days.	0.3
8	F. 73 Am.	Good.	Senile. 2 years.	Normal.	Oct. 15, 1880. Ether. Græfe up.	26 days.	0.3
9	M. 82 Am.	Poor.	Senile. 6 years.	Normal.	Oct. 15, 1880. Ether. Græfe up.	19 days.	0.25
10	M. 52 Irish.	Fair.	6 months.	Normal.	Oct. 19, 1880. Ether. Græfe up. Patient had an attack of pneumonia, and was discharged, at his own request, before absorption of cortical remains was complete.	15 days.	0.05
11	M. 71 Am.	Good.	Senile. 9 years. Hypermature	Normal.	Oct. 20, 1880. Ether. Græfe up. Wound wholly in sclero-corneal junction.	11 days.	0.25
12	F. 69 Am.	Fair.	Senile.	Normal.	Oct. 21, 1880. Ether. Græfe up. Eye opened on eighth day.	11 days.	0.25

13	M. 71 Am.	Good.	Senile.	Normal.	Oct. 28, 1880. Ether. Græfe up. Eye opened on seventh day.	11 days.	0.17
14	F. 75 Irish.	Fair.	Senile. 1 year.	Normal.	Oct. 23, 1880. Ether. Græfe up. Eye opened on seventh day.	27 days.	0.33
15	M. 58 Am.	Fair.	Senile. 5 years.	Doubtful projection outwards.	Nov. 7, 1880 Eserine used. No ether. Græfe up. Lens removed with scoop, owing to presentation of vitreous, none of which was lost. Eye opened on seventh day.	14 days.	0.13
16	F. 65 Irish.	Fair.	8 years.	Normal.	Nov. 9, 1880. Ether. Græfe up. Normal operation.	16 days.	0.25
17	F. 78 Am.	Good.	4 years.	Normal.	Nov. 13, 1880. Ether. Græfe up. Conjunctiva very friable. Clear pupil after operation. Eye opened on third day Two days later, patient struck eye a blow which ruptured wound and filled anterior chamber with blood. Slow inflammation followed.	33 days.	Motions of hand in 15 centimetres.
18	M. 58 Irish.	Feeble.	3 years.	Normal.	Nov. 25, 1880. Ether. Græfe up. Patient was partly imbecile and required an anæsthetic. Slight loss of vitreous. Eye opened on eighth day.	14 days.	0.66

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
19	M. 55 Irish.	Good.	3 years.	Normal.	Dec. 8, 1880. Ether. Græfe up. Eserine used. Much bleeding at operation.	26 days.	0.25
20	M. 65 Am.	Good.	3 years.	Normal.	Dec. 8, 1880. Ether. Græfe up Eserine used before operation. Much bleeding. Eye opened on eighth day.	29 days.	0.25
21	F. 61 Irish.	Fair.	1 year.	Normal.	Dec. 8, 1880. Ether. Græfe up. Pupil left full of blood. Eye opened on eighth day.	29 days.	0 33
22	F. 50 Welsh.	Fair.	3 years.	Normal.	Dec. 30, 1880. Ether. Græfe up. Bandage removed on eighth day.	26 days.	0 33
23	F. 60 Am.	Good.	Senile. 10 years.	Normal.	Feb. 2, 1881. Ether. Græfe up.	14 days	0.33
24	F. 29 Am.	Good.	3 months.	Normal.	Jan. 20, 1881. Ether. Græfe up. Eye opened on fifth day.	13 days.	0.33
25	M. 55 German.	Good.	6 months.	Normal.	Jan. 20, 1881. No ether. Græfe up. Patient ungovernable, removing bandage and finally eloping on ninth day.	9 days.	0.16

26	M. 49 Am.	Fair.	3 years.	Normal.	Jan. 20, 1881. Ether. Græfe up. Vitreous lost, and scoop used.	12 days.	0.16
27	M. 55 Irish.	Good		Normal.	Jan. 13, 1881. Ether. Græfe up. Iritis on fifth day.	28 days.	0.05
28	M. 65 Irish.	Good.	Senile. 2 years.	Projection down and in doubtful.	Jan. 26, 1881. No ether. Græfe up.	14 days.	0.66
29	M. 53 Port.	Good.	6 months.	Normal.	Jan. 28, 1881. No ether. Græfe up.	12 days.	0.5
30	M. 60 Am.	Good.	Senile. 18 months.	Normal.	Feb. 3, 1881. Ether. Græfe up.	20 days.	0.1
31	M. 65 Irish.	Fair.	Senile. 2 years.	Normal.	Feb. 9, 1881. No ether. Græfe up. Eserine instilled before operation.	25 days.	0.66
32	M. 65 Irish.	Good.	Senile. 2 years.	Normal.	Feb. 9, 1881. No ether. Græfe up.	25 days.	0.1
33	F. 73 Am.	Good.	Senile. 10 years.	Normal.	Feb. 12, 1881. Ether. Græfe up. Eserine.	21 days.	0.1

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
34	F. 48 Irish.	Good.		Normal.	Feb. 25, 1881. Ether. Græfe up. Corneal wound being too small, a small bead of vitreous presented, and was snipped off. Eye opened on seventh day.	20 days.	0.1
35	M. 59 Am.	Good.	Senile. 18 months.	Normal.	Feb. 23, 1881. No ether. Græfe up. Much bleeding into anterior chamber. Eye opened on sixth day. Slight iritis came on; also fresh hemorrhage.	25 days.	0.16
36	F. 66 Irish.	Good.	Senile. 6 years.	Normal.	March 5, 1881. No ether. Græfe up. Eserine used. Eye opened on eighth day.	16 days.	0.16
37	F. 58 Irish.	Good.		Normal.	March 5, 1881. No ether. Græfe up Eserine used. Patient very unruly during operation. Conjunctiva friable. Eye opened on third day.	12 days.	0.25
38	M. 55 Irish.	Good.	Senile. 1 year.	Normal.	March 11, 1881. Ether. Græfe up.	25 days.	0.16
39	F. 60 Irish.	Good.	Senile.	Normal.	March 29, 1881. Ether. Græfe up. Vision good up to third day. Patient restless, constantly removing bandage Panophthalmitis ensued.	25 days.	0

40	M. 49 Am.	Good.	Senile. 3 years.	Normal.	April 2, 1881. Ether. Græfe up. Capsule very tough, pupil could not be entirely cleared. Inflammation followed the day after the operation, ending in closure of the pupil.	14 days.	Counts fingers in two metres.
41	F. 66 Am.	Fair.	Hypermature. 11 years.	Central perception somewhat defective.	April 6, 1881. Ether. Græfe up. Iritis followed closing pupil and necessitating a secondary operation.	29 days.	0.25
42	M. 35 Ger.	Good.	1½ years.	Normal.	April 29, 1881. Ether. Græfe up.	22 days.	0.2
43	F. 44 Eng.	Poor.	Senile. 2 years.	Normal.	April 29, 1881. Ether. Græfe up.	22 days.	0.4
44	M. 69 Am.	Poor.	Senile. 3 years.	Normal.	May 10, 1881. Ether. Græfe up. Scoop had to be used for removal of lens. Slight loss of vitreous. Severe iritis followed.	18 days.	0.05
45	F. 54 Irish.	Good.	Senile. 2 years.	Normal.	May 14, 1881. No ether. Græfe up. Eserine used.	14 days.	0 5
46	F. 52 Irish	Good.	Senile. 2 years.	Normal.	May 17, 1881. No ether. Græfe up. Eserine used.	14 days.	0.33

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Mode of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
47	F. 51 Am.	Fair.	Senile. 5 years.	Normal.	May 20, 1881. Ether. Græfe up.	18 days.	0.33
48	F. 70 Irish.	Good.	Senile. 1 year.	Normal.	May 20, 1881. Ether. Græfe up. Patient uncontrollable, removed bandage and wandered about house. Iritis and closure of pupil followed.	30 days.	Perception of light.
49	M. 53 Eng.	Good.	6 years.	Normal.	May 25, 1881. No ether. Græfe up. Eserine used. Some cortical in pupil at time of discharge. To return in fall for possible secondary operation.	15 days.	0.1
50	M. 55 Irish.	Good. An habitual drinker.	Semi solid.	Normal.	June 8, 1881. No ether. Græfe up. Eserine used. Three days later patient struck eye in the night, rupturing wound and filling anterior chamber with blood The next night he fell out of bed, striking on his head. Iritis ensued.	30 days.	0.1
51	F. 51 Irish.	Good.	Senile. 2 years.	Normal.	June 14, 1881. Ether. Græfe up. Eserine used. Normal operation, followed by a low form of iritis, which blocked pupil. Patient to return for secondary operation.	24 days.	Counts fingers at 75 centimetres.

52	M. 49 Am.	Good.	6 years.	Normal.	June 16, 1881. Ether. Græfe up. Eserine used.	14 days.	0 4
53	F. 51 Irish.	Good.	Senile.	Normal.	June 18, 1881. Ether. Græfe up. Free hemorrhage. Scoop used to remove lens. Eye opened on seventh day. Iritis.	32 days.	0.2
54	M. 70 Am.	Fair.	Senile.	Normal.	June 22, 1881. Ether. Græfe up. Eserine used.	16 days	0.6
55	F. 75 Am.		Senile.	Normal.	June 26, 1881. Ether. Græfe up. Normal operation. Patient proved restless and uncontrollable. Got out of bed at night and walked the ward. Corneal suppuration ensued.	17 days	0
56	M. 66 Am.	Good.	Senile.	Normal.	July 7, 1881. Ether. Græfe up. Bandage removed on seventh day.	20 days.	0.8
57	M. 71 Irish.	Good.	Senile.	Normal.	July 9, 1881. Ether. Græfe up. Eye opened on seventh day.	18 days.	0 3
58	M. 67 Am.	Good.	6 months.	Normal.	July 13, 1881. Ether. Græfe up.	21 days.	0.2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
59	M. 70 Irish.	Good.		Normal.	July 13, 1881. No ether. Græfe up. Some vitreous lost. Slow recovery.	29 days.	0.2
60	M. 68 Am.	Good.	Hypermature. 8 years.	Projection deficient inwards.	July 13, 1881. No ether. Græfe up.	21 days.	0.5
61	M. 68 Germ.	Good.	Senile. 2½ years.	Normal.	July 15, 1881. No ether. Græfe up.	21 days.	0.2
62	M. 72 Am.	Good.	Senile. 5 years.	Normal.	July 22, 1881. No ether. Græfe up. Normal operation, followed by iritis. Pupil blocked at time of discharge. To return for secondary operation.	28 days.	Perception of light.
63	F. 50 Irish.	Anæmic.	2 years.	Normal.	Aug. 9, 1881. No ether. Græfe up. Eye opened on seventh day.	19 days.	0.1
64	F. 60 Irish.	Poor.	1 year.	Doubtful projection upwards.	Aug. 10, 1881. No ether. Græfe up. Vitreous presenting; lens was removed by scoop. Tedious convalescence; iritis.	35 days.	0.5
65	F. 67 Am.	Fair.		Normal.	Aug. 10, 1881. Ether. Græfe up. Eye opened on seventh day.	16 days.	0.1

66	F. 47 Am.		3 years.	Normal.	Aug. 26, 1881. Ether. Græfe up. Did well until eighth day, when the eye was rubbed by the patient, in consequence of which the wound opened, and a small hernia of iris occurred.	23 days	0.35
67	M. 80 Irish.	Good.	Senile. 17 years.	Normal.	Sept. 16, 1881. Ether. Græfe up. Much capsule in pupil at time of discharge. To return for secondary operation.	21 days.	Perception of light.
68	M. 75 Am.	Fair.	Senile.	Normal.	Sept. 16, 1881 Ether. Græfe up. Iris prolapsed a little into one corner of wound, and somewhat delayed healing.	35 days.	0.3
69	F. 84 Irish.	Good.	Senile. 2 years.	Normal.	Sept. 20, 1881 Ether. Græfe up. Normal convalescence.	24 days.	0.5
70	M. 60 Irish.	Good.	Senile. 3 years.	Normal.	Sept. 24, 1881. Ether. Græfe up.	19 days	0.4
71	M. 81 Irish.	Poor.	Senile. 1 year.	Normal.	Sept. 27, 1881. Ether. Græfe up. Iritis on tenth day.	50 days.	0.3
72	F. 68 Germ.	Good.	Senile. 14 months	Normal.	Sept. 28, 1881. Ether. Græfe up.	15 days.	0.3

FORM OF A BEQUEST

TO THE

INFIRMARY.

I give and bequeath to the Massachusetts Charitable Eye and Ear Infirmary, of Boston, the sum of dollars, to be applied to the uses of said Infirmary.

FIFTY-SEVENTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1882.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
No. 34 School Street.

LIST OF CONTRIBUTORS TOWARDS THE PERMANENT FUND OF $100,000, OCTOBER 1, 1882.

Nathaniel Thayer	$25,000	Roger Wolcott	$100
Quincy A. Shaw	3,000	Edward I. Browne	250
William Endicott, Jr.	2,500	Charles Thorndike	100
J. Montgomery Sears	1,000	A friend	200
Samuel W. Swett	300	Martin L. Bradford	100
A friend	100	Mrs. Peter C. Brooks	300
A friend	100	Friend	200
Louis Curtis	25	Henry Saltonstall	500
Stephen Salisbury	2,000	Henry B. Rogers	1,000
A friend	100	Edward D. Peters	25
Franklin H. Story	100	Friend	10
Ellen F. Mason	500	Theodore Lyman	250
Ida Mason	1,000	Wm. G. Means	100
Mrs. Henry Pickering	50	Wm. Amory	100
Henry Pickering	50	Pity	500
Mrs. John F. Anderson	25	Dr. F. P. Sprague	500
H. H. Hunnewell	2,500	Arthur T. Lyman	250
Francis W. Hunnewell	100	Anna C. Lowell	300
From N.	200	David Sears	50
Fred L. Ames	1,000	Edward Whitney	500
James L. Little	500	George P. Upham	500
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Dr. Henry L. Shaw	100	Mary Ann Wales	100
Augustus Lowell	500	H	25
Wm. R. Robeson	500	Mrs. E. V. Ashton	1,000
Friends	100	A Bostonian	1,000
Mrs. Caroline Merriam	100	A. J. West	10
N. D. & J. P. Spaulding	1,000	Mrs. Elizabeth Gibson	200
Dr. R. W. Hooper	500	M. W. S.	100
Amory A. Lawrence	100	John S. Farlow	500
J. Huntington Wolcott	2,000		
Total			$54,570

REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1882.

In behalf of the Managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the report of the surgeons for the year ending Sept. 30, 1882.

During the past year the system of water works and drainage in the main building has been thoroughly examined and renewed in accordance with the most approved methods, and it is hoped that this work — which was greatly needed — will prove entirely satisfactory, and require no more outlay for many years to come. No unusual outlay in any other form has been made.

The largely increased area provided for the accommodation of house patients, and the treatment of cases, has necessarily added to our annual expenditures; and the Infirmary will not have reached its full limit of usefulness until our income shall have warranted its being filled to its utmost capacity. At present a portion of the wards are closed from want of the means needed to meet the expenses.

The treasurer of the Infirmary reports the income and expenditures for the year to have been as follows: —

Annuities paid		$600 00
Running expenses of the Infirmary . . .		19,129 44
		$19,729 44
Income from investments . .	$6,075 27	
Board of patients	600 00	
Donation from the Commonwealth,	10,000 00	
		16,675 27
Showing a deficiency of		$3,054 17

With a view of securing a permanent fund, the income from which would be sufficient to meet this increasing expenditure, Nathaniel Thayer, Esq., sent us the noble gift of $25,000 as the foundation for a permanent fund of $100,000. Upon the receipt of this sum the Board of Managers made an urgent appeal to the benevolent public for subscriptions towards raising the remainder. Up to the present time the whole amount received is $54,570. It is earnestly hoped that the present fiscal year will see the fund completed.

A resident of the western portion of our Commonwealth made the very generous offer of the sum of $10,000 to the Infirmary ; upon condition that a surgeon be sent to Pittsfield, or some other central station, at least four times a year, to examine cases and give advice thereon. The board, after careful consideration, has accepted this special gift; though it is fully aware that in the near future, possibly the income derived from the sum may be not more than sufficient for the execution of the resulting duties.

On the first visit, made in the month of September to the House of Mercy, in Pittsfield, twenty-five cases presented themselves, and it is probable the number will increase.

The total number of patients treated during the past year has decreased from 10,082 to 9,768. The number of house

patients has increased from 486 to 581, and a steady increase must be looked for every year with the growth of our population and of the poorer classes.

The plan of charging a fixed sum for the filling of all prescriptions at the Infirmary, adopted a year ago, has resulted in making the apothecary department as near self-sustaining as possible.

It is believed that this charitable institution, which appeals to all without distinction of creed or sex, will continue to meet with ample support.

FRANKLIN H. STORY.
CALVIN ELLIS.
CHAS. P. CURTIS.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary:

Gentlemen, — The surgeons of the Infirmary present herewith a summary of their work for the current year ending Sept. 30, 1882.

For the first time in many years, the surgeons have to report a decrease in the number of persons applying for relief. The total number of patients recorded is 9,768, as compared with 10,082 for the previous year, 1881. The decrease of 314 is about equally divided between the eye and ear patients. The number of house patients treated is 513. This is more than in any previous year.

For the past six months the usefulness of the Infirmary has been most seriously curtailed by the closure of two of its wards, involving the loss of fully one quarter of its whole number of beds. This action of the Managers — due as it was to the lack of sufficient means for the support of all the patients the house would contain — has been a source of much embarrassment to the staff, and has deprived many poor people of the relief they might have otherwise obtained.

During the year unusual care has been taken to exclude all persons who were not proper subjects for charitable treatment. The result of this is that more persons than ever before have been registered as unfit.

We are obliged to chronicle the resignation, during the past summer, of Dr. W. S. Dennett, who for several years has served the Infirmary in the capacity of ophthalmic interne,

and more recently as assistant surgeon. The vacancy thus created has been filled by the promotion of Dr. H. W. Bradford, who for many years has faithfully served as interne. Dr. Geo. W. Galvin, for several years ophthalmic externe, has also resigned.

The surgeons desire to acknowledge the valuable aid rendered by the assistants to the medical staff, and to express their satisfaction with the manner in which the general service of the house has been carried on by the superintendent and matron.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1881, to October 1, 1882.

Classification of Patients, Diseases, and Operations.

House Patients.

Males	295
Females	218
	513

Out-Patients.

Whole number of eye patients	7,185
Whole number of ear patients	2,583
	9,768

Residents of Boston	5,562
" other parts of Massachusetts	3,686
" Maine	172
" New Hampshire	155
" Vermont	46
" Rhode Island	36
" Connecticut	5
" other States	40
" British Provinces and foreign countries,	62
" Unrecorded	4
	9,768

Eye patients: —		
Males	3,955	
Females	3,230	
		7,185

Ear patients: —		
Males	1,367	
Females	1,216	
		2,583
		9,768

Diseases of the Eye.

Lids.

Blepharadenitis	255
Lippitudo	4
Hordeolum	38
Ectropium	24
Entropium	9
Trichiasis	24
Anchyloblepharon	1
Symblepharon	3
Œdema	15
Eczema	13
Abscess	47
Chalazion	150
Cyst	15
Verruca	5
Tumor	9
Nævus	2
Ptosis	9
Epithelioma	8
Xanthelasma	3
Herpes	4
Aneurism, traumatic	1
Molluscum	1
Ulcer	2
Milium	2
Phtheiriasis ciliarum	1
	645

Conjunctiva.

Conjunctivitis, catarrhal	1,077
" blenorrhoic	15
" " neonatorum	28
" granular	154
" " with pannus	138
" " phlyctenular	201
" traumatic	24
Ophthalmia, gonorrhœal	7
Chemosis	11
Ecchymosis	22
Pterygium	45
Pinguecula	22
Foreign body on	80
Epithelioma	2
Tumor	3
Cyst	2
Conjunctivitis, diphtheritic	2
	1,833

Cornea and Sclera.

Keratitis, phlyctenular	4
Keratitis	172
" interstitial	22
" traumatic	20
Kerato-iritis	25
Ulcer of cornea	272
" " vascular	53
" " traumatic	25
Abscess of cornea	14
Abrasion of "	30
Rupture	8
Staphyloma anterior	22
Keratoconus	2

Foreign body on cornea	582
Herpes zoster	3
Leucoma	183
Foreign body on sclera	13
Sclero-keratitis	9
Episcleritis	17
Scleritis	28
	1,504

Iris and Ciliary Body.

Iritis	169
" syphilitic	26
" traumatic	8
Prolapse of iris	4
Coloboma	4
Mydriasis	14
Myosis	3
Posterior synechiæ	26
Anterior "	27
Irido-cyclitis	6
Wound of ciliary body	2
Hypopion	15
Cyclitis	3
	307

Choroid.

Choroiditis	82
Posterior staphyloma	19
Sclerotico-choroiditis posterior	23
Irido-choroiditis	12
" " sympathetic	1
Glaucoma	15
Rupture of choroid	1
Panopthalmitis	5
	158

Retina.

Retinitis	4
" albuminurica	3
" apoplectica	4
" pigmentosa	1
Hemeralopia	7
Nyctalopia	2
Neuro-retinitis	8
Separation of retina	10
Disease of macula lutea	1
	40

Optic Nerve.

Neuritis	21
Atrophy	44
Embolism central artery	1
	66

Vitreous.

Opacities	18
Hemorrhage	3
	21

Lens.

Cataract, hard and soft	146
" incipient	51
" congenital	7
" traumatic	43
" capsular	6
" posterior polar	6
" lamellar	4
Dislocation of lens	12
Aphakia	1
	276

Lesions of Globe and Orbit.

Hydrophthalmus	1
Exophthalmus	4
Microphthalmus	3
Phthisis bulbi	41
Rupture of globe	2
Foreign body in anterior chamber	3
" " " eyeball	6
Periostitis of orbit	1
Orbital cellulitis	3
Disorganized globe	21
Abscess of orbit	1
	86

Affections of Percipient Apparatus.

Amblyopia	38
Amblyopia ex abusu	17
Muscae volitantes	14
	69

Refraction and Accommodation.

Myopia	160
Hypermetropia	287
Astigmatism	162
Presbyopia	94
Asthenopia	141
Paralysis of accommodation	1
	845

Muscular Affections and Neuroses.

Paralysis of facial	5
" third pair	20
" sixth "	4
Diplopia	4

Strabismus convergens	126
" divergens	19
Ciliary neuralgia	5
Insufficiency of internal recti	9
Blepharopasmus	17
Neuralgia, fifth pair	7
" supraorbital	6
Nystagmus	5
	227

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	190
Affection of lachrymal passages	3
Eversion of punctum	7
Abscess of lachrymal sac	35
	235

General Injuries.

Blows and cuts	155
Burns	38
	193

Unfit	524
Unrecorded	87
No disease	26

Recapitulation of Eye Diseases.

Lids	645
Conjunctiva	1,833
Cornea and sclera	1,504
Iris and ciliary body	307
Choroid	158
Retina	40
Optic nerve	66

Vitreous	21
Lens	276
Lesions of globe and orbit	86
Affections of percipient apparatus	69
Refraction and accommodation	845
Muscular affections and neuroses	227
Lachrymal apparatus	235
General injuries	193
Unfit and unrecorded	680
	7,185

Operations on the Eye.

Cataract.

Extraction, method of Græfe, cataract senile	84
" " " " other than senile	3
" " " " congenital	1
" " Lebrune, " senile	2
Suction for soft cataract	3
" " lamellar cataract	2
" " traumatic "	4
Linear " " "	3
Discission for congenital cataract	3
	105

Iridectomy.

For artificial pupil	17
" " " Wecker's operation	1
" lamellar cataract	2
" irido-choroiditis	2
" chronic iritis	1
" " scleritis	2
" removal of foreign body	1
	26

Enucleation of Eye.

For sympathetic ophthalmia, present or threatened	46
For tumor of orbit	1
	47

Other Operations.

Removal of hernia of iris	3
Pterygium, Desmarres's	4
Ptosis	2
Removal anterior portion of globe	2
Peritomy	5
Saemisch's operation for ulcus corneæ serpens	1
Tumor of cornea, epithelial	1
Paracentesis of cornea	6
Tattooing cornea	1
Excision of anterior staphyloma	1
Removal of foreign body from cornea	582
" " " " globe	1
" " " " sclera	3
" " " " globe by electro-magnet	7
Opaque capsule	12
Strabismus convergens	111
" divergens	2
Entropion	2
Trichiasis, Green's operation	3
" Snellen's "	1
" Streatfield's "	1
Removal of ciliary border	1
Passavant's operation	2
Abscess lachrymal sac	1
Canthoplasty	1
Chalazion	38

Lids, abscess of	4
" plastic	12
Lymblepharon	3
Cyst of orbit	1
Tumor of conjunctiva	3
Miscellaneous	28
	845

STATISTICAL REPORT OF DISEASES OF THE EAR.

Oct. 1, 1881, to Oct. 1, 1882.

Abscess, auricle and meatus	18
Deaf-mutism	14
Eczema	16
Exostosis, meatus	2
Fissure, lobe	2
Fibroma, lobe	2
Foreign body, meatus	21
Frost bite	1
Furuncle, meatus	7
Hematoma	1
Injury from foreign body, memb. tymp.	1
Deformity, auricle traumatic	1
Nævus above auricle	1
Otitis externa circumscripta	69
" " diffusa	50
Obstruction of meatus, cerumen	434
Otitis interna	9
" media acuta	204
" " subacuta	36
" " chronica catarrhalis	681
" " purulenta	686
" " " with mastoid abscess	8
" " " " polypi	51
" " catarrhalis tubalis	15
Otalgia neuralgica	37

Perforation of membrana tympani	2
Rupture " "	4
Tinnitus aurium	27
Nævus membrana tympani	1
Unfit	166
Unrecorded	40
Other diseases	29
	2,636

The number of diseases classified in the above table will be found to exceed the whole number of patients treated in the ear department, two diseases sometimes occurring in the same patient.

STATISTICS OF NINETY-NINE OPERATIONS FOR THE EXTRACTION OF CATARACT.

Performed at the Infirmary by the Surgical Staff, during the eleven months ending Aug. 31, 1882.

COMPILED BY HENRY L. SHAW, M. D.

There have been ninety-two operations for the extraction of cataract performed in the Infirmary, during the eleven months ending Aug. 31, 1882. Of these, eighty-four were by the method of Græfe, for the extraction of senile cataract. Four were by the method of Græfe, for other kinds of cataract. Two were by the operation of Lebrune for senile cataract. Nine were by suction, for soft cataract.

The youngest person included in the eighty-four cases of senile cataract by the Græfe method was forty years of age, the oldest eighty-seven years; an average of sixty-two and one quarter. Forty-five of the patients were males and thirty-nine females. Forty-one were Americans, and forty-three foreigners. Ether was administered in forty-eight of the cases, and in thirty-six the operation was performed without it. Vitreous was lost in eight cases where ether was not given, and in one where it was. Eserine was instilled preparatory to or immediately after the operation in thirty-five cases. Atropia was used as a collyrium during convalescence in fifteen cases.

The resulting vision in the eighty-four cases of senile cataract by the Græfe method, taken in most instances at the time of the patient's discharge, is as follows: —

Vision 0.8	1	Vision 0.08	1
" 0.7	1	" 0.06	3
" 0.6	3	" 0.05	1
" 0.5	3	" 0.04	1
" 0.4	7	" 0.03	1
" 0.3	16	" 1.01	1
" 0.2	19	Counts fingers in 1 metre	4
" 0.1	12		12
	62		

Counts fingers in 50 centimetres	1
" " 25 centimetres	3
" " 17 centimetres	1
Quantitative	4
Vision 0	1
	10

In the above eighty-four cases of senile cataract, sixty-two obtained vision of 0.1 and over. Twelve were able to count fingers at one metre. Of the ten remaining cases, there is a reasonable prospect that the vision of seven will be materially improved by a subsequent operation. In one* of the other three cases, the exact condition of the eye is not stated in the records. Of the remaining two, one was a total loss, from panopthalmitis, and the other unpromising.

The results of vision in the four cases of Græfe's operation for other than senile cataract are as follows: —

Vision 0.5	1	Vision 0.08	1
" 0.1	1	" 0.06	1

In two of the above cases the prospect of improvement, by a secondary operation, is good.

---

* See Case 68.

The resulting vision, in the two cases of Lebrune's operation, is as follows: —

Vision 0.5	1	Vision quantitative . . .	1

In one of the above cases, the pupil was closed at the time of discharge, and the patient was advised to return for secondary operation.

The suction method was adopted in four cases of traumatic cataract, two cases of lamellar cataract, two cases of soft cataract, and one of congenital cataract. The results of vision were as follows: —

Traumatic.		Lamellar.		Soft.	
Vision 0.2 . . .	1	Vision 0.2 . . .	1	Vision 0.8 . . .	1
" 0.1 . . .	2	Counts fingers at 25 centimetres . .	1	" 0.1 . . .	1
" .05 . . .	1		2		2
Counts fingers in 50 centimetres . .	1			Congenital.	
	5			Vision excellent, patient an infant,	1

Suction was also performed four times for the relief of pain and tension. Also for the same purpose, the linear method and discission were used, the former in two and the latter in three cases.

Appended is the usual statistical table, containing a somewhat detailed account of the eighty-four operations for senile cataract by the method of Græfe: —

STATISTICS OF EIGHTY-FOUR OPERATIONS FOR SENILE CATARACT BY THE METHOD OF GRÆFE, PERFORMED AT THE INFIRMARY FROM OCT. 1, 1881, TO SEPT. 1, 1882.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	M. 69 Am.	Good.	Senile. 3 years.	Normal.	Oct. 4, 1881. Græfe up. Ether. Operation normal. Slight irritation twelfth day.	24 days.	V. = 0.3
2	M. 60 Am.	Good.	Hyper-mature. 18 years.	Normal.	Oct. 9, 1881. Græfe up. Ether. Lens was partially dislocated up, while dividing the capsule. It was removed in its capsule by scoop, without further accident. Eye opened on seventh day. Normal convalescence.	14 days.	V. = 0.3
3	F. 50 Irish	Good.	Senile. 4 years.	Normal.	Oct. 15, 1881. Græfe up. Ether. Eserine was used before operation. Eye opened on eighth day. No redness. Oct. 26. Slight pain and injection. Atropia.	20 days.	V. = 0.5
4	M. 63 Irish.	Poor.	Senile. 2 years.	Normal.	Oct. 19, 1881. Græfe up. Eserine instilled before operation. Some cortical left at bottom of pupil. Eye opened seventh day. Atropia.	20 days.	V. = 0.2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
5	M. 63 Irish.	Good.	Senile. 18 months.	Normal.	Oct. 19, 1881. Græfe up. No ether. Eserine used. Patient was restless, palpebral aperture small. In consequence, only a small piece of iris was excised, leaving pupillary edge intact. Eye opened seventh day. Pupil clear. Atropia.	19 days.	V. = 0.2
6	F. 47 Irish.	Good.	Senile. 2 years.	Normal.	Oct. 19, 1882. Græfe up. Ether. Eserine used. Operation normal. Eye opened seventh day. Slight prolapse of iris at one end of wound.	15 days.	V. = 0.3
7	F. 60 Irish.	Poor.	Senile. Posterior. Polar. 1 year.	Normal.	Oct. 22, 1882. Græfe up. No ether. Operation normal and convalescence rapid.	12 days.	V. = 0.5
8	M. 70 Irish.	Good.	Senile. 2 years.	Normal.	Oct. 26, 1882. Græfe up. No ether. Eserine used before operation. Considerable hemorrhage from conjunctival flap. Eye opened the seventh day. Blood and cortical in pupil.	14 days	V. = 0.1
9	F. 50 Irish.	Good.	Senile. 1 year.	Normal.	Oct. 27, 1881. Græfe up. No ether. Eserine. Eye opened the eighth day. Normal convalescence.	14 days.	V. = 0.4

10	F. 80 Am.	Good.	Senile. 3 years. Immature.	Normal.	Oct. 20, 1881. Græfe up No ether. Eserine. Lens emerged whole. Free hemorrhage from conjunctival flap. Blood left in anterior chamber. Nov. 2. Slight dull pain. Nov. 7. Iritis. Atropia.	17 days.	V. = 0 1
11	F. 83 Am.	Poor.	Senile. 6 years.	Normal.	Nov. 4, 1882. Græfe up. No ether. Considerable cortical; while removing this, there was a slight loss of vitreous. Wound united slowly.	23 days.	V. = 0 3
12	F. 72 Am.	Good.	Senile. 2 years.	Normal.	Nov. 12, 1881. Græfe up. Ether. Operation and recovery normal.	30 days.	V = 0.2
13	M. 65 Irish.	Good.	Senile. 1 year.	Normal.	Nov. 18, 1881. Græfe up. No ether. Eserine was used before operation. Lens sticky. Nucleus removed with scoop. Much bleeding. Eye was opened the seventh day. Blood and cortical in pupil. Atropia.	19 days.	Counts fingers in twenty-five centimetres.
14	F. 67 Irish.	Good.	Senile. 2 years.	Normal.	Nov. 21, 1881. Græfe up. No ether. Eserine. Normal convalesence.	16 days.	V. = 0.1
15	M. 72 Am.	Very poor.	Senile. 1 year.	Normal.	Dec. 2, 1881. Græfe up. Ether. Eye opened on the seventh day. Pupil blocked with opaque capsule. Had a low form of iritis, with but slight pain. Atropia. Patient's health was so poor that he was discharged on the tenth day. Vision, Feb. 28, 1882, 0.01.	10 days.	V. = 0.1

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
16	M. 68 Am.	Good. Rheumatism.	Hyper-mature. 12 years.	Normal.	Dec. 8, 1881. Græfe up. No ether. Eye deep in orbit. Operation difficult. Large lens removed in fragments. Scoop used. Slight loss of vitreous. Had acute rheumatism on the tenth day, followed by acute iritis, which lasted three weeks.	44 days.	V. = 0.05
17	F. 60 Am.	Good.	Senile. 2 years.	Normal.	Dec. 8, 1881. Græfe up. Ether. Cut had to be enlarged. Only a small piece of iris excised. Eye was opened on seventh day. A small prolapse of iris removed.	44 days.	V. = 0 06
18	M. 68 Irish.	Good.	Senile. 2 years.	Normal.	Dec. 12, 1882. Græfe up. No ether. Operation normal.	37 days.	V. = 0.6
19	M. 55 Scotch.	Poor.	Senile. 6 years.	Normal.	Dec. 14, 1881. Græfe up. Ether. Eserine. After the patient was etherized, the eye proved to be very soft. Operation normal. From the third day, had an attack of irido-choroiditis, which subsided and reappeared several times. Secondary operation, July 18, 1882.	71 days.	V. = 0.1

20	M. 63 Am.	Good.	Hyper-mature. 17 years.	Projection downward fails.	Dec. 14, 1881. Græfe up. No ether. Eserine. On completion of corneal section, patient squeezed lens with extreme force out on to forehead, fluid vitreous escaping. Eye opened on the seventh day. Wound not united. No pain.	34 days.	V. = 0.1
21	M. 63 Am.	Good.	Senile. 12 years.	Normal.	Dec. 15, 1882. Græfe up. No ether. Patient was unable to fix eye, and squeezed lens with some vitreous from eye. Considerable cortical left in pupil. Wound not united on seventh day, when eye was opened. At time of discharge pupil was occluded. To return for secondary operation.	26 days.	Counts fingers in one metre.
22	F. 54 Am.	Poor.	Senile. 1 year.	Normal.	Dec. 16, 1881. Græfe up. No ether. Operation normal. Counted fingers readily at end of sixth day. Shortly after this, had a mild attack of iridochoroiditis. Pupil slowly closed with plastic material. After operation for artificial pupil vision was improved.	60 days.	V. = 0.01
23	M. 64 Am.	Good.	Senile. 2 years.	Normal.	Dec. 16, 1881. Græfe up. Ether. Eserine. Operation normal and convalescence rapid.	10 days.	V. = 0.4
24	M. 56 Am.	Good.	Senile. 5 years.	Normal.	Jan. 2, 1882. Græfe up. Ether. Operation and convalescence normal.	25 days.	V. = 0.3

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
25	M. 44 Am.	Good.	Senile. 6 years.	Normal.	Jan. 6, 1882. Græfe up. Ether. Operation normal. Eye opened the seventh day. Soon after, struck eye on the corner of a table, followed by severe pain lasting all night.	21 days.	V. = 0.2
26	M. 68 Irish.	Fair.	Senile. 2 years.	Normal.	Jan. 10, 1882. Græfe up. Ether. Operation and recovery normal. Eye opened on the seventh day.	16 days.	V. = 0.3
27	M. 63 Irish.	Good.	Senile. 7 years.	Normal.	Jan. 12, 1882. Græfe up. No ether. Counted fingers readily after operation. The fourth day patient had iritis, which slowly blocked the pupil. To return for secondary operation.	30 days.	Counts fingers in 25 centimetres.
28	M. 60 Am.	Good.	Senile. 8 years.	Normal.	Jan. 12, 1882. Græfe up. No ether. Small cut. Lens was partially dislocated while making corneal section. Slight loss of vitreous. Eye opened the seventh day. Slow recovery, but with entire freedom from pain.	44 days.	V. = 0.1
29	M. 68 Can.	Good.	Senile. 6 months.	Normal.	Jan. 19, 1882. Græfe up. No ether. Patient counted fingers before bandage was applied. Had a low form of iritis come on about the seventh day. Atropia.	37 days.	Counts fingers in 50 centimetres.

30	M. 77 Am.	Fair.	Hyper-mature. 6 years.	Normal.	Jan. 25, 1882. Græfe up. Ether. Eserine before operation. Operation normal, and recovery rapid.	13 days.	V. = 0.2
31	M. 68 Am.	Rheumatism.	Senile. 4 years.	Normal.	Jan. 25, 1882. Græfe up. No ether. Eserine. Eye very deeply set, rendering corneal section somewhat difficult to accomplish. Patient had an attack of acute rheumatism, which prolonged his stay in the house.	40 days.	V. = 0.3
32	F. 60 Irish.	Good.	Senile. 1 year.	Normal.	Jan. 27, 1882. Græfe up. Ether, Eye opened on the seventh day. Rapid recovery.	13 days.	V. = 0 3
33	F. 54 Am.	Good.	Senile. 2 years.	Normal.	Feb. 10, 1882. Græfe up. Ether. Eserine. Normal operation and recovery.	10 days.	V. = 0 3
34	M. 61 Am.	Fair.	Senile. 40 years.	Projection falls downward and outward.	Feb. 11, 1882. Græfe up. Ether. Operation normal. Eye opened on the seventh day.	19 days.	V. = 0 8
35	F. 60 Irish.	Good.	Senile. 1 year.	Normal.	Feb. 14, 1882. Græfe up. Ether. Eserine instilled before operation. Iritis ensued the tenth day, slowly closing pupil. To return for secondary operation.	50 days.	Counts fingers in 1 metre.
36	F. 87 B. A.	Good.	Senile. Hyper-mature. 12 years.	Normal.	Feb. 15, 1882. Græfe up. Ether. Eserine. Collapse of cornea rather more than usual. Recovery good, but retarded by patient's striking her eye.	17 days	V. = 0.2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
37	M. 50 Irish.	Fair.	Senile. 3 years.	Normal.	Feb. 23, 1882. Græfe up. Ether. Operation and recovery normal. Patient has cataract of the other eye with entire failure of projection.	27 days.	V. = 0.2
38	F. 73 Am.	Good.	Senile. 3 years.	Normal.	March 8, 1882. Græfe up. No ether. Eserine. Corneal section small. The scoop was used, with a slight loss of vitreous. Much hemorrhage during operation. Eye opened on seventh day. Pupil filled with cortical. To return.	27 days.	Quantitative.
39	M. 64 Irish.	Good.	Senile. 2 years.	Normal.	March 11, 1882. Græfe up. No ether. Eserine. Several unsuccessful attempts were made to remove some opaque capsules adherent to iris. March 16. Great pain at intervals ever since operation. Chemosis. Pupil blocked. Leeches and atropia. To return for secondary operation.	27 days.	Counts fingers in one metre.
40	F. 59 Irish.	Fair.	Senile. 1 year.	Normal.	March 18, 1882. Græfe up. Ether. Operation normal. Patient had slight iritis.	36 days.	V. = 0.3
41	M. 66 Irish.	Poor.	Senile. 3½ years.	Normal.	March 18, 1882. Græfe up. Ether. Operation normal. Eye opened on the seventh day. There was a partial reopening of wound, thought to be due to carelessness of patient.	26 days.	V. = 0.2

42	M. 65 Am.	Good.	Senile.	Doubtful projection upward.	March 22, 1882. Græfe up. No ether. Eserine. The lens was unusually large and dark. It was removed with the scoop. The eye was opened on the seventh day. Pupil blocked with cortical.	27 days.	Counts fingers in one metre.
43	F. 58 Irish.	Poor.	Senile. 1 year.	Normal.	March 24, 1882. Græfe up. Ether. The scoop was used. Some vitreous lost. There was more than the usual amount of conjunctival irritation two weeks after operation.	26 days.	V. = 0.2
44	F. 51 Am.	Poor. Hemiplegia.	Senile. 10 years.	Normal.	March 24, 1882. Græfe up. No ether. Eserine before operation. The corneal section was enlarged. Iritis ensued on the fourth day. Leeches and atropia.	21 days.	V. = 0.06
45	F. 48 Irish.	Poor.	Senile. 5 years. Posterior synechiæ.	Normal.	March 28, 1882. Græfe up. Ether. Normal operation and recovery.	21 days.	V. = 0.3
46	F. 80 Am.	Good.	Senile. 2 years.	Normal.	April 1, 1882. Græfe up. No ether. Eserine. Eye opened the seventh day. Chemosis. Received a blow from a falling screen. Atropia.	15 days.	V. = 0 3
47	M. 67 Am.	Fair.	Senile.	Normal.	April 5, 1882. Græfe up. No ether. Eserine. The lens was sticky, and was removed piecemeal. Eye opened on the seventh day. Much cortical in pupil. At the time of the patient's discharge the pupil was clearing rapidly. To return for secondary operation.	16 days.	V. = 0.2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
48	M. 65 Am.	Fair.	Senile. 1 year.	Normal.	April 20, 1882. Græfe up. No ether. Eserine. Knife transfixed iris in making corneal section. Vitreous fluid. Scoop used. Eye opened on the seventh day. Iritis ensued, requiring the subcutaneous injection of morphia. Pupil closed. To return for secondary operation.	38 days.	V. = 0.04
49	M. 60 Irish.	Fair.	Senile. 6 years.	Normal.	April 24, 1882. Græfe up. No ether. Operation and recovery normal.	29 days.	V. = 0.2
50	M. 47 Am.	Good.	Senile.	Normal.	April 26, 1882. Græfe up. Ether. Eserine. Operation and convalescence normal.	16 days.	V. = 0.4
51	F. 62 Am.	Poor.	Senile. 1½ years.	Normal.	April 26, 1882. Græfe up No ether. Eserine. The knife transfixed iris in making corneal cut. The eye was opened the seventh day.	13 days.	V. = 0.4
52	F. 77 Am.	Fair.	Senile. 2 years.	Normal.	May 6, 1882. Græfe up. No ether. Eserine.	15 days.	V. = 0.4
53	F. 71 Am.	Poor.	Senile. 7 years.	Normal.	May 13, 1882. Græfe up. No ether. Eserine. The iris was slightly wounded in making corneal cut. Good recovery.	15 days.	V. = 0.2

54	F. 64 Am.	Poor.	Senile. 3 years.	Normal.	May 13, 1882. Græfe up. Ether. The eye was opened the sixth day. Opaque capsule in pupil. Slight iritis. Atropia.	17 days.	V. = 0.1
55	M. 40 Irish.	Good.	Senile. 2 years.	Normal.	May 13, 1882. Græfe up. No ether. Eye opened the seventh day. Cortical in pupil. Atropia.	31 days.	V. = 0.4
56	M. 70 Irish.	Good.	Senile.	Normal.	May, 1882. Græfe up. Ether. The eye was opened the seventh day. Opaque capsule in pupil. June 6, 1882. The capsule was removed with canula forceps, with no bad symptoms. Atropia.	30 days.	V. = 0.1
57	F. 60 Irish.	Good.	Senile. 2 years.	Normal.	May 20, 1882. Græfe up. Ether. Small iridectomy. June 6. Opaque capsule blocking pupil. Divided by needle.	30 days.	Counts fingers in seventeen centimetres.
58	F. 48 Am.	Good.	Senile. 2 years.	Normal.	May 20, 1882. Græfe up. No ether. Eye opened on the seventh day. Normal recovery. Sept. 8, 1882. Vision tested.	15 days.	V. = 0.6
59	M. 71 Am.	Good.	Senile. 2 years.	Normal.	June 4, 1882. Græfe up. Ether. Operation normal. Wound healed slowly. Some opaque capsules in pupil.	15 days.	V. = 0.1
60	F. 60 Irish.	Good.	Senile. 2 years.	Normal.	June 6, 1882. Græfe up. Ether. Iris was not divided to pupillary edge at first cut and a second was required. The eye was opened on the seventh day. Has had slight pain. Opaque capsule in pupil. Atropia.	13 days	Counts fingers in 25 centimetres.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
61	F. 80 Am.	Good.	Senile. 1 year.	Normal.	June 7, 1882. Græfe up. Ether. Eserine was used before operation, which was normal. Eye opened on the seventh day.	24 days.	V. = 0.8
62	F. 59 Irish.	Good.	Senile. 1 year.	Normal.	June 7, 1882. Græfe up. Ether. Eserine. Operation and recovery normal.	23 days.	V. = 0.5
63	F. 57 Am.	Fair.	Senile. 2½ years.	Normal.	June 7, 1882 Græfe up. Ether. Eserine instilled before operation. Normal recovery.	22 days.	V. = 0.7
64	F. 50 Irish.	Good.	Senile. 4 years.	Normal.	June 10, 1882. Græfe up. Ether. The operation was attempted without ether. The patient was unable to hold still, and after the corneal counter puncture was made the knife was withdrawn and ether given. Considerable cortical was left in pupil. The eye was opened the fourth day. Much conjunctival injection and slight swelling of lids. Opaque capsule in pupil. Atropia. To return for secondary operation.	40 days.	Quantitative.
65	M. 67 Can.	Poor.	Senile. 7 years.	Normal.	June 9, 1882. Græfe up. Ether. The operation was normal. Pain and swelling of conjunctiva came on in forty-eight hours, followed by panopthalmitis.	29 days	V. = 0

66	M. 73 Am.	Good.	Senile. 4 years.	Normal.	June 9, 1882. Græfe up. Ether. Operation and recovery normal.	14 days.	V. = 0.2
67	F. 75 Irish.	Fair.	Senile. 3 years.	Normal.	June 9, 1882. Græfe up. Ether. Operation normal. Sept. 8, 1882. Vision tested.	37 days.	V. = 0.3
68	F. 53 Irish.	Poor.	Senile. 1½ years.	Normal.	June 9, 1882. Græfe up. Ether. Patient was doing well, but while convalescent, and walking about the house, fell down stairs and fractured her leg. She was sent immediately to the hospital. No further opportunity to test her vision	16 days.	Quantitative.
69	M. 47 Irish.	Good.	Senile. 15 years.	Normal.	June 13, 1882. Græfe up Ether. Operation normal. The eye was opened on the seventh day. The patient had a cataract of the other eye operated on by the couching method, in Dublin, by Sir Wm. Wilde.	27 days.	V. = 0.4
70	M. 77 Am.	Good.	Senile. 7 years.	Normal.	June 14, 1882. Græfe up. No ether. Operation and recovery normal.	21 days.	V. = 0.2
71	M. 70 Am.	Poor.	Senile. 1 year.	Normal.	June 21, 1882, Græfe up. Ether. The eye was opened on the seventh day. Pupil blocked with opaque capsule. To return for secondary operation.	17 days.	V. = 0.06

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
72	M. 44 Irish.	Poor.	Senile.	Normal.	June 21, 1882. Græfe up. Ether. Normal operation and recovery.	22 days.	V. = 0.2
73	M. 56 Am.	Good.	Senile. 1 year.	Normal.	June 22, 1882. Græfe up. Ether. Normal operation and recovery.	16 days.	V. = 0.2
74	M. 55 Am.	Good.	Senile.	Normal.	June 23, 1882. Græfe up. Ether Operation normal. Recovery slow, but without any bad symptoms.	25 days.	V. = 0.1
75	F. 75 Irish.	Fair.	Senile. 1 year.	Normal.	June 27, 1882. Græfe up. Ether. The eye was opened on the seventh day. Considerable conjunctival redness. Atropia.	21 days.	V. = 0 3
76	M. 72 Am.	Good.	Senile. 4 years.	Normal.	June 29, 1882. Græfe up. Ether. Operation and recovery normal.	28 days.	V. = 0 03
77	F. 64 Irish.	Poor.	Senile. 2 years.	Normal.	July 3, 1882. Græfe up. Ether. The eye was opened the seventh day. Capsule in pupil. Normal convalescence.	35 days.	V. = 0.2
78	F. 64 Irish.	Poor.	Senile. 1 year.	Normal.	July 23, 1832. Græfe up. Ether. Eye opened on the seventh day.	24 days.	V. = 0.2

79	M. 56 Irish.	Good.	Hyper-mature. 12 years.	Normal.	July 24, 1882. Græfe up. Ether. During convalescence had pain and repeated attacks of hemorrhage into anterior chamber. Atropia. Pupil blocked with opaque capsule. To return for secondary operation.	46 days.	Quantitative.
80	F. 55 Irish.	Good.	Senile.	Normal.	Aug. 4, 1882. Græfe up. No ether. The eye was opened the seventh day. Opaque capsule in pupil. Aug. 28, 1882. Capsule divided.	13 days.	V. = 0.6
81	M. 53 Am.	Good.	Senile. 2 years.	Normal.	Aug. 4, 1882 Græfe up. No ether. Operation normal and recovery rapid.	14 days.	V. = 0.3
82	M. 55 Irish.	Good.	Senile. 2 years.	Normal.	Aug 16, 1882. Græfe up. No ether. No reaction whatever from operation.	21 days.	V. = 0.3
83	M. 57 Am.	Good.	Senile. 2 years.	Normal.	Aug. 27, 1882. Græfe up. No ether. Eserine instilled before operation. The eye was opened the eighth day, when there was more than the usual amount of conjunctival injection. Capsule in pupil.	23 days.	V. = 0.2
84	M. 77 Am.	Good.	Senile.	Normal.	Aug. 20, 1882. Græfe up. Ether. The eye was opened on the seventh day. Small hernia of iris. Patient struck eye with finger the day before. The tenth day the prolapse increased, and was excised.	32 days.	V. = 0.1

FORM OF A BEQUEST

TO THE

INFIRMARY.

I give and bequeath to the Massachusetts Charitable Eye and Ear Infirmary, of Boston, the sum of dollars, to be applied to the uses of said Infirmary.

FIFTY-EIGHTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1883.

BOSTON:
ALFRED MUDGE & SON, PRINTERS.
No. 24 Franklin Street.

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary,

1883-84.

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ELIZA M. WHITFORD, *Matron.*

REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1883.

In behalf of the managers of the Massachusetts Charitable Eye and Ear Infirmary, we herewith present the report of the surgeons for the year ending Sept. 30, 1883.

By this it will be seen that the whole number of patients, and also the number of those received into the Infirmary as house patients, have increased over those recorded last year.

The number of house patients would have been still larger had the funds of the Infirmary permitted. But, as it is this class of patients, only, that increases our expenses, through the cost of food and attendance, it has been found necessary, in order not to exceed our income, to adhere to the rule laid down last year, whereby the number of beds in use was restricted to sixty out of the entire number of ninety.

The managers regret exceedingly to be thus obliged to curtail the usefulness of the charity; but, even with this reduced number of beds, the income for the year has been exceeded by the ordinary expenses, to which must be added a considerable sum paid, since the last annual report, for the

renewal of the water works and drainage of the main building, as therein mentioned; all of which deficiencies, amounting to nearly three thousand dollars, are a charge upon our accumulated capital.

Whenever our means will permit, the number of beds allotted to patients will be increased.

In the last report, it was stated that the contributions to the fund of $100,000, which it was desired to obtain, then amounted to $54,570. Since then we have received additions to it of only $700, the managers having been unwilling, during the past year, to again press their claims upon a community which had already responded so generously to their needs, and while so many other charities were making their wants known.

The income derived from the funds already received has been a most welcome addition to our means, and enabled us to relieve much distress and suffering since the last report, and we trust that we shall not much longer be obliged to decline the aid which the surgeons of the Infirmary are so generously willing to extend to still larger numbers of the poor and afflicted, without fee or reward, except the consciousness of well-doing.

In consequence of the generous donation referred to in the last report, four visits were made to Pittsfield during the year, where eighty three new cases of diseases of the eye presented themselves, and twenty-four of the ear, besides many cases that had been seen and advised before. The new cases, however, are included and tabulated in the general report of the surgeons submitted herewith.

We regret to be obliged to announce the resignation, owing to ill-health, of our president, Dr. Calvin Ellis, who has been succeeded by Dr. Charles D. Homans. Mr. Augustus Hemenway has also succeeded, as treasurer, Mr. Franklin

H. Story, who has kindly given much valuable time during the past six years to the finances of the Infirmary, including much unusual labor in connection with the erection of the new building and the investment of the additions to our funds.

J. HUNTINGTON WOLCOTT.
WILLIAM R. ROBESON.
EDWARD I. BROWNE.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary.

Gentlemen, — The surgeons of the Infirmary herewith present their report of the medical and surgical work performed during the year ending Sept. 30, 1883. The whole number of patients applying has been 9,929. This is an increase over the preceding year of 161. This increase has taken place in the ear department, the total number of eye patients being less than for 1882. On the other hand, the number of eye patients admitted as inmates of the house is considerably larger than last year. A list of diseases of these house patients for both eye and ear is incorporated in the report. The total is not increased thereby, as all patients, before being admitted as inmates, are first registered in the out-patient department; but this list, together with that of the principal operations, shows the amount of work performed exclusively for those more difficult cases which require admission. The whole number of operations has been 1,078. This is also an increase over the previous year, when there were 845. According to custom for several years past, a special table of cataract operations is appended. As numbers accumulate, these tables possess more and more scientific value and interest.

The general character of the services rendered by the Infirmary has been the same as in former years. There have been, as usual, very many injuries to be treated. The greater number of these are incurred by stone-cutters and certain

classes of mechanics who are especially liable to have fragments of metal or other substances thrown into the eyes. There have been 626 instances where such foreign bodies have been impacted in the cornea, and 92 cases where similar accidents have occurred to other parts of the eye. Besides these, there have been 227 cases of general injuries, such as cuts, blows, and burns. This makes nearly a thousand accidents for which relief has been sought, and the number enables us to realize what an inestimable benefit the Infirmary is to the poor, in this direction alone. In another direction an equally large class, recorded under the head of troubles of refraction and accommodation, has sought assistance. Here are cases where, owing to some optical defect or muscular weakness, the eyes cannot perform the work demanded of them, and need for the most part the assistance of suitable glasses. A prolonged examination is often necessary to determine these, and the services of the Infirmary here cover broad ground; for not only does the help thus afforded enable many to earn a livelihood who otherwise would be dependent, but many children and young persons are thus assisted to get an education which otherwise they would be compelled to forego, and made able to learn a trade or profession, instead of being condemned to the inferior forms of manual labor. In addition to the classes above described, the records show a large number of patients who have been treated for almost every variety of disease of the eye and ear, the mere enumeration of which would take too long. Such diseases are due for the most part to hardship, neglect, and exposure of all sorts, or to unwholesome surroundings, and often intensified by hereditary taint or want of proper nourishment. With such unpromising material, the best-directed efforts sometimes fail; but all these cases receive careful attention, and, if necessary, prolonged treatment. In a class of the most intractable of these, viz.,

granulations of the conjunctiva, a new remedy recently introduced into Europe under the name of jequirity, has been tried, and given a large percentage of most gratifying results. A paper was published on the subject in the "Boston Medical and Surgical Journal," by the senior Interne, Dr. Standish, and attracted much interest. The complete results for the year in tabular form are added to the report as a record of valuable experience. The surgeons have pleasure in acknowledging the faithful and efficient services of the Internes and other assistants to the medical staff, and the satisfactory results of the labors of Superintendent and Matron.

By accident there was no notice in the report of last year of the death of Dr. Howard Hutchins Smith, who, after being for many months a constant attendant and occasional assistant at the Infirmary, finally received the appointment of Interne and entered upon its duties. An earnest student and devoted to his profession, with abilities of a high order which promised to be of great value to the Infirmary, he was struck down by a fatal disease after having held his post some three months only. The surgeons wish here to testify to their appreciation of his worth, and sorrow at his premature loss.

Since the report of the managers was sent in the sudden death of Dr. Calvin Ellis has taken place. The surgeons cannot refrain from expressing the high personal regard they felt for him and their sense of the great loss his death has inflicted on both the profession and the community.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1882 to October 1, 1883.

Classification of Patients, Diseases, and Operations.

House Patients.

Eye Patients: —			
Males		313	
Females		209	
			522
Ear Patients: —			
Males		15	
Females		8	23
Total House Patients			545

Out Patients.

Eye Patients: —			
Males	3,533		
Females	2,999		
		6,532	
Ear Patients: —			
Males	1,432		
Females	1,420	2,852	9,384
Total number of Patients			9,929

Residents of Boston	5,645
" other parts of Massachusetts	3,827
" Maine	166
" New Hampshire	107

Residents of Vermont	29
" Rhode Island	23
" Connecticut	16
" other States	34
" British Provinces and foreign countries	78
" Unrecorded	4
	9,929

Diseases of the Eye.

Lids.

Blepharadenitis	358
Lippitudo	5
Hordeolum	66
Ectropium	16
Entropium	7
Trichiasis	33
Anchyloblepharon	1
Symblepharon	5
Œdema	25
Abscess	36
Chalazion	119
Cyst	10
Verruca	7
Tumor	10
Nævus	3
Ptosis	8
Epithelioma	5
Herpes	1
Cellulitis	2
Enchondroma	1
Epicanthus	1

Cut of brow	1
Phlegmon of the lower lid	1
Abscess of brow	1
Ecchymosis of lid	1
	723

Conjunctiva.

Conjunctivitis, catarrhal	959
" blenorrhoic	24
" " neonatorum	25
" granular	163
" " with pannus	79
" " phlyctenular	262
" traumatic	27
Ophthalmia, gonorrhœal	2
Chemosis	3
Ecchymosis	48
Pterygium	33
Pinguecula	14
Foreign body on	77
Cyst	1
Hyperæmia of	14
Serous effusion into	1
	1,732

Cornea and Sclera.

Keratitis	19
" phlyctenular	22
" interstitial	16
" traumatic	13
Kerato-iritis	16
Ulcer of cornea	410
" " vascular	28

Ulcer of cornea traumatic	28
" " serpens	1
Abscess of cornea	10
Abrasion of "	40
Rupture of "	9
Staphyloma anterior	21
Foreign body on cornea	626
Leucoma	196
Opacities of cornea	2
Foreign body on sclera	5
Sclero-keratitis	16
Episcleritis	4
Scleritis	27
	1,510

Iris and Ciliary Body.

Iritis	174
" syphilitic	17
" traumatic	18
Prolapse of iris	14
Coloboma	2
Corectopia	1
Mydriasis	25
Hernia of iris	1
Posterior synechiæ	16
Anterior "	20
Irido cyclitis	3
Wound of ciliary body	4
Ciliary redness	38
Hypopion	16
Hemorrhage into anterior chamber	1
Ciliary irritation	6
	356

Choroid.

Choroiditis	59
Posterior staphyloma	14
Sclerotico-choroiditis, posterior	14
Irido-choroiditis	6
Glaucoma	21
Panopthalmitis	1
	115

Retina.

Retinitis	13
" albuminurica	3
" apoplectica	4
" pigmentosa	8
Hemeralopia	6
Neuro-retinitis	10
Separation of retina	20
Overstimulation of retina	1
Disease of macula lutea	2
Hemorrhage into macula lutea	1
	68

Optic Nerve.

Neuritis	15
Atrophy	56
Abnormal distribution of nerve	1
	72

Vitreous.

Opacities	14
Hemorrhage	6
	20

Lens.

Cataract, hard and soft	123
" incipient	66
" congenital	4
" traumatic	41
" capsular	2
" posterior polar	7
" cretaceous	3
Dislocation of lens	13
	259

Lesions of Globe and Orbit.

Hydrophthalmus	2
Exophthalmus	3
Phthisis bulbi	31
Rupture of globe	7
Foreign body in anterior chamber	4
" " eyeball	6
Periostitis of orbit	1
Disorganized globe	7
Glioma	2
Intraocular tumor	1
Epithelioma of orbit	1
	65

Refraction and Accommodation.

Myopia	207
Hypermetropia	503
Astigmatism	149
Presbyopia	93
Asthenopia	79
Emmetropia	8
Paralysis of accommodation	6
	1,045

Muscular Affections and Neuroses.

Paralysis, facial	6
" third pair	13
" sixth pair	3
Diplopia	12
Strabismus convergens	114
" divergens	24
Ciliary neuralgia	2
Insufficiency of internal recti	13
Blepharospasm	10
Neuralgia, supra-orbital	4
Nystagmus	11
Central lesion	1
	213

Lachrymal Apparatus.

Epiphora and obstruction of lachrymal ducts	183
Affection of lachrymal passage	13
Eversion of punctum	7
Abscess of lachrymal sac	58
Enlarged " "	1
Lachrymal fistula	5
	267

General Injuries.

Blows and cuts	169
Burns	58
	227

Unfit	537
Unrecorded	68
No disease	22
No diagnosis	23
Eloped	36
	686

Affections of Percipient Apparatus.

Amblyopia	55
" ex abusu	25
Muscæ volitantes	25
Scotoma	5
	110

Summary of Eye Diseases.

Lids	723
Conjunctiva	1,732
Cornea and sclera	1,510
Iris and ciliary body	356
Choroid	115
Retina	68
Optic nerve	72
Vitreous	20
Lens	259
Lesions of globe and orbit	65
Affections of percipient apparatus	110
Refraction and accommodation	1,045
Muscular affections and neuroses	213
Lachrymal apparatus	267
General injuries	227
Unfit, unrecorded, etc.	686
Total	7,468

STATISTICAL REPORT OF THE DISEASES OF THE EAR.

Oct. 1, 1882, to Oct. 1, 1883.

Deaf-mutism	11
Eczema	25
Exostosis, meatus	2
Foreign body, meatus	27
Frost bite	1
Furuncle, meatus	22
Hematoma	2
Otitis externa circumscripta	58
" " diffusa	37
Obstruction of meatus, cerumen	475
Otitis interna	13
" media acuta	196
" " subacuta	53
" " chronica catarrhalis	728
" " purulenta	793
" " " with mastoid abscess	11
" " " " polypi	36
" " catarrhalis tubalis	7
Otalgia neuralgica	39
Rupture membrana tympani	11
Tinnitus aurium	20
Unfit	190
Unrecorded	70
Other diseases	48
	2,875

Out-Patients.

Whole number of ear patients	2,875
Residents of Boston	1,718
" other parts of Massachusetts	1,038
" Maine	45
" New Hampshire	25
" Vermont	7
" Rhode Island	7
" Connecticut	7
" other States	7
" British Provinces and foreign countries	17
Unrecorded	4
	2,875

Ear patients: —		
Males	1,447	
Females	1,428	
	2,875	

OPERATIONS ON THE EYE.

Lens.

Extraction senile cataract, Græfe up	70
" other than senile cataract, Græfe up	8
" " " " " Liebreich	1
" traumatic cataract, suction	7
" " " Liebreich	1
" " " Linear	1
" " " Lebrune	1
Discission, congenital "	2
" traumatic "	5
	96

Lense Capsule.

Agnew's operation	7
Divided with De Wecker's scissors	2
Tearing, various needle operations	14
	23

Iris.

Iridectomy for glaucoma	11
" " preparatory to cataract operation	3
" " ulcus cornea serpens	2
" " artificial pupil	14
" " lamellar cataract	3
" " irido-choroiditis	4
" " anterior staphyloma	1
" " glaucoma (attempted)	1
Iridotomy for secondary cataract	1
Excision of hernia of iris	3
	43

Cornea.

Removal of foreign body	626
Saemisch's operation for ulcus cornea serpens	5
Excision of epithelial tumor	3
Paracentesis	15
Tattooing	1
Excision of anterior staphyloma	5
	655

Conjunctiva.

Desmarres's operation for pterygium	5
Excision of pterygium	4
Peritomy	1
Plastic operation	1
Excision of fungus granulations	2
	13

Muscles.

Tenotomy of internal rectus for strabismus convergens	77
" " " " with advancement of internal rectus for strabismus divergens . .	6
	83

Lids.

Excision of cuticle of upper lid for ptosis . .	2
Green's operation for trichiasis	7
Græfe's " " "	3
Snellen's " " "	3
Streatfield's " " "	1
Arlt's " " "	3
Canthoplasty	4
Chalazion	56
Incision of abscess	5
Plastic operations	2
Alloplasty	1
Excision of enchondroma	4
Stretching of lids for blepharospasm . . .	4
Excision of tumor	1
" " cyst	7
" " nævus	1
	104

Miscellaneous.

Enucleation of eye for sympathetic ophthalmia, present or threatened	34
Removal of anterior portion of globe . . .	2
" " steel from anterior chamber with electro-magnet	4
Removal of other foreign bodies from the anterior chamber	2

Removal of steel from the globe with the electro-magnet	4
Removal of foreign bodies from the sclera	5
Incision of abscess of lachrymal sac	8
Excision of sarcoma of orbit	1
Incision of post-ocular abscess	1
	61

Summary.

Operations on the lens	96
" " " capsule	23
" " " iris	43
" " " cornea	655
" " " conjunctiva	13
" " " muscles	83
" " " lids	104
Not above enumerated	61
	1,078

Statistics of Diseases of House Patients from Oct. 1, 1882, to Oct. 1, 1883.

Lids.

Ectropion	4
Trichiasis	8
Symblepharon	2
Ptosis	2
	16

Conjunctiva.

Conjunctivitis, catarrhal, acute	3
" blenorrhic	2
" granular	8
" " with pannus	71

Ophthalmia, gonorrhœal	4
" neonatorum	2
" strumous	4
Pterygium	3
	97

Cornea and Sclera.

Keratitis	16
" phlyctenular	3
" interstitial	5
" traumatic	1
Kerato-iritis	2
Ulcer of cornea	45
" " " vascular	3
" " " traumatic	10
" " " serpens	12
Abscess of "	6
Rupture " "	1
Staphyloma, anterior	9
Kerato-konus	1
Epithelioma of cornea	2
Leucoma	8
Sclero-keratitis	1
Scleritis	1
Staphyloma anterior sclerotic	1
	127

Iris and Ciliary Body.

Iritis	12
" syphilitic	6
" traumatic	1
" rheumatic	1
" serous	1

Posterior synechiæ	1
Anterior "	1
Occluded pupil	4
	27

Choroid.

Sclerotico-choroiditis posterior	1
Irido-choroiditis	5
" " sympathetic	17
Glaucoma	13
	36

Retina and Optic Nerve.

Separation of retina	2
Neuritis	2
	4

Lens.

Cataracts, hard and soft	91
" congenital	1
" traumatic	25
" capsular	17
" posterior polar	1
" capsular-lenticular	1
" lamellar	3
	139

Lesions of Globe and Orbit.

Phthisis bulbi	6
Foreign body in anterior chamber	4
" " " vitreous	2
" " " iris	1
Sarcoma of orbit	1

Post ocular abscess	1
" " hemorrhage	1
Intra ocular tumor	1
Panopthalmitis	1
	18

Muscles of the Eye.

Strabismus convergens	2
" divergens	4
	6

General Injuries.

Blows and cuts	31
Burns	5
	36

Unrecorded or no disease	14
Hysterical photophobia	2
	16

Disease of the Ear.

Deaf-mutism	1
Otitis media acuta	2
" " chronica catarrhalis	1
" " purulenta	14
" " " with mastoid abscess	5
	23
Total	545

Total males	328	
" females	217	
		545

STATISTICS OF NINETY-SIX CATARACT OPERATIONS, INCLUDING SEVENTY EXTRACTIONS FOR SENILE CATARACT BY METHOD OF VON GRÆFE.

Performed at the Infirmary by the Surgical Staff during the year ending Aug. 31, 1883.

COMPILED BY FRANCIS P. SPRAGUE, M. D.

Of the ninety-six cases above mentioned, the senile cataracts only are comprised in the following tables. The other operations were either done by different methods or are, by reason of age or some unusual complication, considered as not properly belonging to this class. The age of forty has been taken as the dividing line between senile and non-senile cataract. All cases of extraction, therefore, in patients under this age, are excluded from the tables, even though operated on in the same manner. It is only by adopting rules of this kind and separating our operations into different groups that the comparison of statistics can have any practical value. The twenty-six operations not included in the tables are as follows: —

Græfe extractions	8
Liebreich "	2
Lebrune "	1
Linear "	1
Suction operations	7
Discission "	7
	26

The results of the eight Græfe extractions are here given: —

Vision	$\frac{5}{6}$ 1	Vision	.0 1
"	0.4 2	"	perception of light . 2
"	0.3 1		—
"	0.2 1		8

Of the three failures, one was a case complicated with sympathetic disease, in another there was extensive leucoma, caused by a burn, and in the third old choroidal inflammation. This last patient is reported to have had two brothers similarly affected, and in both of whom operation for cataract failed. Of the remaining five cases, three were traumatic, and the other two, cause unknown, the patients being aged thirty-two and thirty-four years. Two of the traumatic cases presented a foreign body in anterior chamber which was removed at time of operation. One of these patients, a man aged forty-three, with result of vision 0.4, was able, with a glass of + 15 D to read Sn. 1 from 25 to 40 cm. This caused a good deal of fatigue, and could be done only for a short time. Of the two Liebreich extractions, one resulted in vision 0.2, the other in perception of light. In the latter case there was coloboma of iris and fluid vitreous, necessitating use of scoop. The Lebrune operation was a traumatic case, lens shrunken and part of it removed, vision 0.1.

The linear extraction, also a traumatic case, resulted in vision 0.1. Of the seven suction operations, five were traumatic, one complicated with closed pupil from specific iritis, and one cause unknown. Results are given in five as follows: —

Vision	0.2 2	Vision.	Reads ordinary print 1
"	0.1 1		Perception of light . 1
			—
			5

In the two cases not recorded, the patients left the house ten days after operation, probably too soon to have the sight tested. They were both cases of injury. The patient with

specific disease had an iridectomy performed a week before the suction. This case gave the result described as able to read ordinary print. The case of perception of light was an old injury, with a piece of wood imbedded in the cornea.

The removal of cataract by suction appears to be looked upon by many surgeons as dangerous or unsatisfactory. This is perhaps owing to want of experience with it. It has been in use at the Infirmary, more particularly by certain members of the surgical staff, for many years, and with ample opportunity has demonstrated its safety and usefulness. In traumatic cataract it finds frequent application. It has the great merit of relieving at once the pain and tension caused by a swollen lens, without exposing the patient to the suffering and risk involved in waiting for absorption, or to the danger of an extraction, sufficiently formidable in uncomplicated cases. The method used at the Infirmary is to introduce a bent broad needle into the cornea about midway between the centre and periphery, but a little nearer the latter. The capsule is opened, and if necessary the wound enlarged, before withdrawal of the instrument, which is effected with but slight escape of aqueous. The point of suction instrument is then introduced into wound and pushed into centre of lens and suction made by the mouth. The force can be easily graduated. The fear sometimes expressed of drawing out vitreous unawares is a bugbear of the imagination. The instrument has points of three sizes with corresponding calibres. It can be withdrawn and reintroduced if necessary, though of course it is not so simple a matter as the first introduction, and more likely to cause bruising of the corneal wound and general irritation. The small corneal cut almost invariably heals at one. If not it must be due to circumstances which would prevent healing of any wound. The visual results obtained in traumatic cases are difficult of comparison, as each injury is *sui generis*, and to estimate the

value of an operation it is necessary to speak of it in some detail. It is for this reason that the above comments, which might have been much farther extended, have been made.

Among the seven cases of discission, two were congenital and five traumatic. In two of these latter, lens was somewhat shrunken and freely lacerated at time of operation. One had result of vision 0.2, the other vision $\frac{5}{60}$. A third case was said to have been improved. Of the other results there is no record.

The Græfe extractions for senile cataract numbering seventy were performed on forty-one males and twenty-nine females.

The nationalities were

American	42
Irish	24
Other nationalities	4
	70

The proportion of Americans here shown is much larger than usual. The oldest patient was 82 and obtained vision of 0.2. The youngest 45. Ether was administered in 55 cases, in the remaining 15 there was no anæsthetic.

The results of vision are as follows: —

Vision 0.7	2	Vision $\frac{5}{60}$	2
" 0.5	1	" $\frac{4}{60}$	1
" $\frac{6}{16}$	1	" $\frac{3}{50}$	1
" $\frac{5}{12}$	1	" $\frac{3}{60}$	3
" 0.4	10	" $\frac{1}{50}$	1
" 0.3	7	" $\frac{1}{60}$	1
" 0.2	17	" sees well	1
" $\frac{5}{24}$	1	" can read	1
" $\frac{5}{36}$	1	" sees way about	1
" 0.1	9	" perception of light	2
		" 0	6
			70

The three cases where vision is described in words, left the house before being tested by glasses, and in all probability with suitable glasses would reach vision of 0.1 or more. In the two cases of perception of light there is prospect of improvement by secondary operation, but at present they are counted among the failures. Taking vision of 0.1 as the standard of success we have : —

Full success	50	or	71.4	per	cent.
Partial "	12	"	17.2	"	"
Failures "	8	"	11.4	"	"
	70		100.0		

If we throw out the two cases of perception of light where a secondary operation will no doubt improve vision, our failures will be 6, or 8.5 per cent. The unusually large number of failures point to there having been much unfavorable material for operation the past year, and an inspection of the tables will confirm this view. Outside of the cases where result nil, in two of which the scoop was resorted to, vitreous has appeared in fourteen additional instances, requiring the use of the scoop seven times. In one of these (case No. 22) the lens was removed in its capsule. The eight cases of failure are numbered as follows : —

No. 17. In this case pupil was small. Operation followed by severe and prolonged inflammation, but prospect of secondary operation.

No. 19. Projection inwards doubtful, both capsule and lens chalky, wound healed but eventually cyclitis.

No. 26. Post synechiæ. Much hemorrhage. Vitreous came, lens dislocated, could not be removed by scoop.

No. 29. Pupil did not react to light. Patient unruly, tore off bandage repeatedly, and got out of bed. Panophthalmitis.

No. 30. Health poor, eye small and deeply set, severe vomiting after ether. Panophthalmitis.

No. 41. Vitreous fluid like water, lens sank, an attempt to remove it by scoop failed, whole globe collapsed.

No. 54. Severe iritis with closed pupil. Patient to return for secondary operation.

No. 57. Iris tissue unhealthy, unusual collapse of cornea. Irido-choroiditis ensued.

Besides the cases above mentioned the tables will show many others where the circumstances have been unfavorable, but with more fortunate results.

Eserine has been instilled previous to an operation, or immediately after, in eleven cases. Iritis has occurred ten times in all, but much of it has been of a mild type. The secondary operations have been only four in number, cases No. 12, 16, 22, and 53. No. 16 got vision of $\frac{6}{12}$, the others 0.1 each. In estimating results obtained, this limited number of secondary operations should be borne in mind, and also the fact that but few of the patients have returned for a second examination. The vision given, therefore, represents for more than three quarters of the cases only the amount acquired during their brief stay in the Infirmary, whereas a steady improvement often goes on for weeks and even months after operation. The compiler presented, as a matter of interest, a number of cases illustrating this, in the report of the Infirmary for 1878.

The tables are here appended : —

STATISTICS OF SEVENTY OPERATIONS FOR SENILE CATARACT BY THE METHOD OF GRÆFE, PERFORMED AT THE INFIRMARY FROM SEPT. 1, 1882, TO SEPT. 1, 1883.

No.	Sex, Age, Nationality	General Health.	Charaeter and Duration of Cataraet.	Funetional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	M. 60 Irish.	Good.	Senile. 1 year.	Normal. Cornea 0115.	Sept. 10, 1882. No ether. Some opaque capsule left in pupil. Convalescence normal.	18 days.	0.2
2	F. 75 Irish.	Good.	Senile. 1½ years.	Projection and perception fair. Cornea .0115.	Sept. 28, 1882. Ether. Græfe upwards.	35 days.	0.2
3	M. 64 Irish.	Good.	Senile. 3 years.	Normal. Cornea .0115.	Sept. 28, 1882. Græfe. No ether. Normal convalescence. Eye opened seventh day.	18 days.	0.3
4	M. 68 Am.	Poor.	Senile. 2 years.	Normal. Cornea .0109.	Sept 30, 1882. Ether. Græfe.	25 days.	0.5
5	F. 78 Am.	Good.	Senile. 2 years.	Normal. Cornea .011.	Oct. 3, 1882. Græfe. Ether.	26 days.	Can read.

6	F. 66 Am	Poor.	Senile. 1 y ar.	Normal. Cornea .0115.	Oct. 4, 1882. Græfe. Ether.	26 days.	0 2
7	F. 63 Am.	Good.	Senile. 6 years.	Normal. Cornea .0115.	Oct. 6, 1882. Græfe. Ether.	25 days.	0.1
8	M. 61 Am.	Poor.	Senile. 4 years.	Projection poor. Cornea .0115.	Oct. 13, 1882. Græfe. Ether. After removal of speculum, and while extracting cortical, considerable loss of vitreous. Post. synech. present. Flashes of light and pain at first. Wound healed well. Considerable pain and sensitiveness after operation. Eighth day. Blood in ant. chamber slow in absorbing.	28 days.	0.4
9	F. 67 Irish.	Poor.	Senile. 1½ years.	Normal. Cornea .0115.	Oct. 18, 1882. Græfe. Ether. Eserine Eye opened eighth day. Clear pupil. No redness.	14 days.	0.2 $\bar{c}+15$ reads Sn.0.8 at 20 cm.
10	M. 50 Irish.	Good.	Hard, Mature.	Normal. Cornea .0115.	Oct. 25, 1882. Ether. Græfe up.	13 days	0.3
11	F. 73 N. B.	Fair.	Hard, Mature. 2 years.	Normal. Cornea .0115. Pupil medium.	Oct. 28, 1882. Eserine. Græfe up. No ether. Much blood into ant. chamber, obscuring whole operation; a thin film remained. Cataract apparently wholly removed. Eye opened on eighth day. Some blood in ant. chamber. Eighteenth day lower part of pupil clear, upper part still blocked with cortical and capsule.	24 days.	$\frac{5}{24}$

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
12	M. 67 Am.	Good.	Hard, Mature. 2 years.	Normal. Cornea .0115. Pupil large.	Oct. 28, 1882. Eserine. Græfe upwards. Ether. Normal operation. Nucleus small. Much cortical removed. Nov. 4. Very restless throughout; much pain last thirty-six hours. Eye opened. Chemosis. Some capsule in pupil. Atropine. Fomentation. Cathartic. 15th. Redness diminishing; cortical absorbing. 30th. Pupil still blocked. To return for secondary operation. 1883. Secondary operation. Wecker's scissors.	32 days.	0.1
13	F. 71 Am.	Good.	Senile. Hard.	Normal. Cornea .0115.	Oct. 28, 1882. Græfe upwards. No ether. Normal.	22 days.	0.2 Reads 1. $\bar{c}+15$ with ease.
14	F. 69 Am.	Good.	Hard, Senile.	Cornea .0115.	Oct. 28, 1882. Græfe upwards. Ether. Patient suddenly came out of the ether and made violent contraction of ocular muscles, causing loss of vitreous. Ether continued and scoop used. Considerable irritation. Wound healed and pupil clearing.	28 days.	$\frac{3}{60}$
15	M. 70 Am.	Fair.	Senile.	Normal. Cornea .0115.	Oct. 31, 1882. Græfe up. Ether. Normal.	21 days.	0.2

16	F. 60 Am.	Poor.	Senile. 2 years.	Normal. Cornea .0115.	Nov. 1, 1882. Græfe upwards. No ether. Eserine Hard nucleus. Not much cortical removed, as vitreous presented after nucleus removed. Bandage removed on fourth day on account of œdema and discharge. Low form of iritis. Atropine IV. Pupil blocked with cortical and blood. Secondary (capsule torn).	49 days.	$\frac{6}{12}$
17	F. 60 Irish.	Fair.	Senile. 7 months.	Normal. Cornea .011. Pupil small.	Nov. 4, 1882 Eserine. No ether. Græfe up. Dialysis caused by knife. Much soft cortical. Clear pupil. Nov 5. Opened eye herself. Nov. 12. No pain. Eye opened. Cornea hazy, pupil seems closed. Quinine grs. ij t. d. Atropine. Open air exercise. Nov. 15. Ant. chamber obliterated. Nov. 22. Ant chamber re-established. At time of discharge pupil contracted and filled with membrane. To return for secondary operation.	21 days.	Good perception of light.
18	M. 77 Am.	Good.	Senile.	Normal. Cornea .0115.	Nov. 10, 1882. Ether. Græfe modified. Large conjunctival flap. Small iridectomy. Eye opened seventh day, wound well healed; ninth day, shade instead of bandage.	13 days	0.1 Reads Sn. 1.25 c+12.
19	F. 61 Am.	Fair.	Post Polar. Capsule opaque and chalky. Lens yellow.	Perception normal. Projection doubtful inwards. Cornea .0115. Pupil fair.	Nov. 11, 1882. Græfe up. Ether. Lens at time of extraction divided into three or four fragments. A portion of chalky capsule remained at lower part of pupil. On attempting to remove it with forceps it was found adherent and some fluid vitreous escaped. Nov. 18. Has had no pain. Eye opened, wound well healed, some redness, capsule in pupil. At time of discharge fingers at 2 *m.* Afterward cyclitis and loss of eye.	17 days.	0.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
20	F. 55 Am.	Fair.	Hard, Mature. 6 years.	Normal. Cornea 012. Pupil medium.	Nov. 15, 1882. Græfe up. No ether. One broad post. synechia upwards. Op. normal. Clear pupil. Good vision. Eye opened seventh day. Little redness, pupil clear. Ninth day, atropine.	15 days.	< 0.3.
21	M. 62 Am.	Good.	Hard, Senile. 4 months.	Normal. Cornea .0115.	Nov. 21. 1882. Græfe up. Ether. Normal.	20 days.	< 0.2
22	M. 66 Am.	Good.	Capsula-Lenticular. 5 years.	Normal. Cornea .0115. Pupil medium.	Nov. 23, 1882. Græfe up. Ether. Attempt to remove lens in capsule. Finally succeeded after several introductions of Bowman's spoon, and much loss of vitreous. 25th. No uneasiness since operation. No swelling nor discharge. Ninth day, eye opened. Little redness, wound not consolidated. Bandaged two days longer. At time of discharge some blood still in pupil. Cystoid cicatrization inwards. April 25, 1883. Iridectomy with Wecker's scissors.	18 days.	0 1
23	F. 66 Am.	Good.	Hard, Senile. 1 year.	Normal. Cornea .0115. Pupil medium.	Nov. 23, 1882. Ether. Græfe up. Normal.	15 days.	$\frac{5}{60}$

24	M. 52 Am.	Good.	Senile. 7 years.	Perception and projection perfect. Cornea .012. Pupil fair.	Nov. 29, 1882. Eserine. No ether. Græfe up. Fluid vitreous; began to escape before iridectomy. Bowman's scoop used, and lens withdrawn at once, as soon as section of iris completed. Eighth day, eye opened; little redness. Atropine	18 days.	< 0.3
25	M. 51 German	Good.	Senile. 4 years.	Perception and projection good Cornea .0116. Pupil fair.	Dec. 9, 1882. Græfe up Ether. Slight conjunctivits two days after operation, which speedily subsided.	24 days.	0.7
26	M. 72 Am.	Fair.	Senile. 5 years.	Normal. Cornea .0116. Pupil fair.	Dec. 5, 1882. Græfe up. Ether. Post synechiæ divided. Ant. chamber filled with blood. Vitreous appeared in attempting to open capsule. Scoop used unsuccessfully. Lens dislocated into vitreous. Enucleation later.	19 days.	0
27	M. 64 Am.	Poor.	Senile. 1 year.	Normal. Cornea .0112. Pupil, dilatation poor. .005.	Dec. 31, 1882. Græfe up. No ether During division of capsule patient made violent contraction which expelled considerable fluid vitreous. Fair sized nucleus removed with scoop. Healing normal.	21 days.	$\frac{1}{60}$
28	M. 73 Am.	Fair.	Senile. 3 years.	Normal. Cornea .012. Pupil .0035. Dilatation good.	Jan. 10, 1883. Without ether. After division of capsule patient made forcible contraction which expelled lens with vitreous. Eye opened seventh day. Counted fingers readily, wound not fully united, bandage continued. 26. Sees well, bandage left off.	28 days	0.1

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
29	M. 63 English.	Fair.	Senile. 8 months.	Percep. normal. Projection fair. .011 Pupil .004. Does not react to light.	Jan. 16. 1883. Græfe up. Ether. Bronchial irritation from ether. Large mass of opaque lens (but no nucleus) removed, leaving clear black pupil. Patient very unruly after operation Tore off bandage repeatedly when not observed and got out of bed. Panophthalmitis ensued.	42 days.	0
30	M. 68 Am.	Poor.	Senile. 2 years.	Normal. Cornea .011.	Jan. 18, 1883. Græfe up. Ether. Small eye. deeply set. External arcus senilis. Cut small, enlarged with scissors. Lens very large, removed with difficulty. Wound looked finely. Vomiting after ether severe. Some pain night after operation. Swelling and discharge. Jan. 26 Panophthalmitis developed. Thymol solution.	30 days.	0
31	F. 53 Irish.	Nervous woman.	Senile. 2 years.	Normal. Cornea .012. Pupil fair.	Jan. 30, 1883. Ether. Græfe up.	24 days.	< 0.3
32	M. 67 Am.	Good.	Senile. 8 years.	Normal. Cornea .011. Pupil .005.	Feb. 3, 1883. Græfe up. Ether. Operation without accident. Large nucleus. Considerable cortical and thickened capsule removed. Normal convalescence. Feb. 10. Eye healed.	19 days.	0.3

33	M 59 Am.	Good.	Senile. 2 years	Normal. Cornea .012. Pupil .006 (Dilated.)	Feb. 11, 1883 Ether. Græfe up. Operation normal. Bandage removed finally on seventh day. Slight irritation of iris from seventh to twelfth day.	17 days.	0.2
34	M. 79 Am.	Good.	Senile. 2 years.	Normal. Cornea .0115. Pupil .003. (Without atropine.) Dilatation good.	Feb. 12, 1883. Ether. Græfe up.	21 days.	0.1
35	M. 62 Am.	Slight Sciatic Rheumatism.	Senile. 3 years.	Normal. Cornea .0125. Pupil .004.	Feb. 27, 1883. Ether. Græfe up. Small iridectomy. No atropine nor eserine. Speculum removed after cut and elevator used as in other eye previously operated on, the vitreous was fluid. (See No. 8.) Flashes of light and occasional pain during first two days. Eye opened eighth day. Normal.	20 days.	0.4
36	M. 72 Am	Good.	Senile. 1 year.	Normal. Cornea .012. Pupil .004.	Feb. 28, 1883. Ether. Græfe up.	21 days.	$\frac{3}{60}$
37	F. 50 Irish.	Good.	Senile. 3 years.	Normal. Cornea .0115. Pupil .003.	March 3, 1883. Ether (by request). Eserine. Græfe up. Clear space above lens showed after the iridectomy, so lens was removed with scoop. Small piece of cortical remained, but as vitreous escaped in small quantity attempt to remove it given up. Eye opened on eight day. No redness, large clear pupil, anterior chamber re-established. Slight tendency of wound to gape in centre; continue compressive bandage.	23 days.	$\frac{5}{36}$

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Proeess. Treatment. Seeondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
38	M. 65 Am.	Good.	Senile. 9 years.	Normal. Cornea .011. Pupil .003.	March 7, 1883. Græfe up. Ether. Large iridectomy. Considerable cortical. Pupil left clear. March 13. Uneasiness. Eye opened and found red. Convalescence slow. Point of iris caught at inner angle of wound. Some capsule in pupil, but clear space above.	26 days.	$\frac{4}{60}$
39	F. 60 Irish.	Good.	Senile. 4 years.	Normal. Cornea .0115. Pupil .003.	Feb. 13, 1883. Ether. Græfe up. Some cortical left for fear of vitreous. which presented, but none escaped. Normal convalescence.	18 days.	0.4
40	F. 50 Irish.	Fair. Pulmonary.	Senile. 5 years.	Normal. Cornea .011. Pupil 0055. $\bar{c}$ atropine.	March 16, 1883. Ether. Græfe up. Normal operation. Eye opened eight day. Normal convalescence.	21 days.	0 2
41	M. 64 Irish.	Fair.	Senile. 12 years. Lens dark brown.	Normal.	March 17, 1883. Ether. Græfe up. Cut small, anticipating vitreous. None came with cut. but whole vitreous flowed off, though eye was flaccid. Lens sunk. One attempt with scoop failed. Globe collapsed. Some discharge. Little pain.	60 days.	0
42	M. 71 Am	Good.	Senile. 8 years.	Normal. Cornea .012. Good pupil.	April 4, 1883. Eserine. Ether (by request). Græfe up. Operation normal. Clear pupil. Eye opened eighth day. Everything normal.	15 days.	0.1

43	F. 82 Am.	Digestion Poor.	Senile. 1 year.	Projec. ? to right. Cornea .0115. Pupil good.	April 11, 1883. Eserine. No ether. Græfe up. Normal operation. Patient restless after operation, cut eye once and disturbed bandage often. April 15. Pain over eye. No swelling. Eye opened eighth day. Much redness, some chemosis, clear pupil. Tenth day iritis. Two leeches to temple.	21 days.	0.2
44	M. 75 Am.	Good.	Senile. 2 years. o. u.	Normal. Cornea 012. Pupil .007. $\bar{c}$ atropine.	April 14, 1883. Ether. Græfe up. Operation normal, till as lens was to be removed, the patient, though thoroughly etherized, shook his head violently and forced out lens and a large amount of vitreous. There had been no reaction to Græfe cut or iridectomy. Nothing was touching the eye at the moment. Bandage kept up without trouble (daily renewals) nine days. Wound healed and eye natural shape. April 26. Good perception of light. Secondary operation will improve vision. Aug. 26. Sends word that he "sees very well with the eye."	24 days. Sees well.	Sees well.
45	F. 68 Am.	Poor.	Senile. 6 years.	Normal. .012. Pupil .006.	April 28, 1883. No ether. Græfe up. Eserine. Large nucleus. Some cortical left in pupil, as vitreous presented. Eighth day eye opened, no redness. Pupil half full of cortical. Atropine.	17 days.	$\frac{5}{60}$
46	M. 45 Irish.	Good.	Senile. 2 years.	Normal. Cornea .0115. Pupil fair.	April 24, 1883. Græfe up. Normal.	27 days.	$\frac{5}{12}$

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
47	M. 68 Am.	Dyspepsia, rheumatism.	Senile. 1½ years.	Normal. Cornea 012. Pupil fair.	May 1, 1883. Ether. Græfe up.	20 days.	0.4
48	M. 65 Am.	Good.	Senile. 2 years.	Normal. Cornea .0115. Pupil fair.	April 20, 1883. Ether. Græfe up.	18 days.	0.2
49	M. 72 Am.	Poor.	Senile. 3 years.	Normal. Pupil small and poor reaction.	May 5, 1883. Ether. Græfe up Operation normal. Eye opened seventh day: redness. Wound not healed. May 28 Has had mild iritis.	24 days	0.4
50	F. 63 Am.	Poor.	Senile. 5 years.	Projec. poor. .012. Pupil .005.	May 9, 1883. Ether. Græfe up.	20 days.	$\frac{3}{60}$
51	F. 63 Am.	Good.	Senile. 2 years.	Normal. .0115. Pupil small, with good reaction.	May 21, 1883. Eserine. No ether. Græfe up. Patient restless. Lens came out suddenly, with a slight gush of vitreous Eye closed immediately. Eye opened ninth day. Vitreous occupies whole length of wound. which gapes slightly. Continue compressive bandage.	22 days.	0 4

52	F. 57 Irish.	Good.	Senile. 6 years.	Normal. Cornea .015. Pupil .005.	May 21, 1883. Eserine. No ether. Græfe up. Vitreous presented as soon as pressure was begun. Scoop then used and large lens extracted. Some loss of vitreous. Eye immediately closed. Eye opened ninth day. Cornea clear, little redness. Wound slightly distended by vitreous. Compressive bandage.	22 days.	0.1
53	M. 65 Irish.	Poor.	Senile. 1 year.	Normal. .0115. Pupil fair.	May 29, 1883 Ether. Modified Græfe. Normal operation. Convalescence normal till fifth day, when patient struck eye with hand, causing wound to gape nearly its whole length. June 16, wound healed well. Some opacities in pupil July 7, 1883. Second operation. False membrane torn through with needle.	30 days.	0.1
54	M. 80 Am.	Good.	Senile. 4 years.	Normal. .0115. Pupil .003. Large arcus senilis.	June 15, 1883. Ether. Græfe up. Operation normal Bandage removed seventh day. Iritis. Pupil blocked. To return for artificial pupil.	28 days.	Quantitative.
55	M. 60 Irish.	Fair.	Senile. 3 years. Lens black.	Normal. .0115. Pupil good.	June 13, 1883. Græfe up. Ether. After operation, ophthalmoscope showed large patch of choroidal atrophy. The vision recorded obtained c—3D.	43 days.	c—3D. 0.2.
56	F. 78 Am.	Fair.	Senile. 4 years.	Normal. .011. Pupil .005.	June 20, 1883. Ether. Græfe up. Normal. Bandage left off seventh day. Everything normal.	18 days.	0.7.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatm nt.	Resulting Vision.
57	M. 72 Am.	Good.	Senile. 5 years.	Normal. Cornea .0115. Pupil fair.	June 20, 1883. Ether. Græfe up. Iris rotten. Unusual collap-e of corneal flap. Ant. chamber did not refill. Eye opened on seventh day. Irido-choroiditis ensued.	36 days.	0
58	M. 67 Irish.	Good.	Senile. 2 years.	Normal. Cornea .0115. Pupil fair.	July 2, 1883 Ether. Græfe up. Operation normal. Bandage left off seventh day. Rapid convalescence.	32 days.	0.4
59	M. 78 Am.	Good.	Senile. 4 years.	Normal. Cornea .011. Pupil good.	July 7, 1883. Ether. Modified Græfe up. Lens dislocated on pressure and extracted with scoop, leaving small fragment behind. Small loss of vitreous. Some iritis later.	25 days.	0.1
60	M. 78 Irish.	Good.	Senile.	Normal. Cornea .012. Pupil fair.	July 12, 1883. Ether. Modified Græfe up. Eye opened seventh day. Normal.	14 days.	0.3
61	F. 77 Am.	Good.	Senile. 7 years.	Normal. Cornea .0115. Pupil fair.	July 19, 1883. Ether. Græfe up. Cut small, enlarged. Eighth day eye opened. Good union. Blood in ant. chamber. Counted fingers easily.	20 days.	0.2
62	F. 63 Scotch.	Good.	Senile. 3 years.	Normal. Cornea .012. Pupil good.	July 19, 1883. Ether. Græfe up. No atropine nor eserine. Eye opened fifth day. Atropine. So ne cap-ule in pupil.	21 days.	0.2

63	M. 63 Irish.	Fair.	Senile. 2 years.	Normal. Cornea .012. Pupil good.	July 29, 1883. Preliminary iridectomy seven days previously. Ether. Modified græfe up. No atropine nor eserine. Patient restless and displaced bandage. Convalescence normal. Eye opened seventh day.	Eloped.	Could see to walk about easily.
64	F. 63 Scotch.	Good.	Senile.	Normal. .012. Pupil good.	July 29, 1883. Ether. Græfe up (modified). No atropine nor eserine. Eye opened fifth day.	14 days.	$\frac{1}{36}$
65	F. 78 Irish.	Fair. Patient childish.	Senile. 1 year.	Normal. Cornea .012. Pupil .005.	July 31, 1883. No ether. Græfe up. Patient repeatedly tore off bandage in first three days after operation, and opened eyes at each dressing.	21 days.	$\frac{3}{50}$
66	M. 63 Irish.	Good.	Senile. 3 years.	Normal. Cornea .012. Pupil .004.	Aug. 6, 1883. Ether. Græfe up.	44 days.	< 0.4
67	M 80 Irish.	Good	Senile. S. (Noticed six weeks ago.)	Normal. .0115. Pupil good.	Aug. 6, 1883. Ether. Græfe up.	33 days.	0.2
68	F. 60 Irish.	Good.	Senile. 2 years.	Normal. .0115. Pupil .003.	Aug. 18, 1883. Ether. Græfe up. Eye opened seventh day. Normal.	10 days.	< 0 2

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
69	F. 65 Irish.	Good.	Senile. 3 months. (?)	Normal. .0115. Pupil good.	Aug. 23, 1883. Ether. Græfe up. Eye opened seventh day. Considerable circumcorneal injection. Atropine IV. Some bits of cortical in the pupil. Occasional pain during second week. Slow but steady convalescence.	26 days.	0.2
70	M. 49 Irish.	Good.	Senile. 8 years.	Normal. .012. Pupil good.	Aug. 30, 1883 Ether. Græfe up. Eye opened seventh day. Normal convalescence.	11 days.	0 4

REPORT OF CASES OF GRANULAR LIDS TREATED BY JEQUIRITY.

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THE treatment of granular lids and chronic conjunctival inflammations with jequirity promises to be a great relief to the wards of charitable ophthalmic institutions, for by it the time necessary for the cure of a large proportion of such cases is shortened from several months to a few weeks. And inasmuch as the same result is obtained by a smaller expenditure on individual patients, insomuch is the usefulness of such institutions extended.

The drug is called jequirity from its Brazilian name, but the botanical name is Abrus precatorius. The portion of the plant used is the seed, a small, round red bean or pea, having a round black mark at the point of attachment to the pod. It is found in all tropical countries, but is supposed to have been indigenous to India.

For medicinal use the seeds should not be old, but have a bright shining surface. When absolutely fresh the seeds have a waxlike, glistening appearance, and the older they become the more they lose this gloss.

Jequirity has for many years been a popular remedy among the negroes of Brazil and of the West Indies, but until recently has not attracted the attention of the medical profession, although in Rosenthal's *Synopsis Plantarum Diaphoricarum*, published in 1862, on page 1022, an allusion is made to the treatment of diseases of the eye by means of this drug. To De Wecker, however, is due the credit of bringing this treatment prominently to the attention of the profession. His

articles published in the *Klinische Monatsblätter* attracted universal attention, and many favorable reports have been made by different observers in various countries. A number of cases have also been reported in which the drug has had no action whatever. These latter cases are, undoubtedly, due either to the fact that the seeds were not fresh enough or to an error of preparation. Such an error occurred in a series of cases at this institution which will be spoken of later, in which no result was obtained.

The drug is prepared by macerating the powdered bean in water in the proportion of ten grammes of the bean to five hundred grammes of water. This must be done with cold water and in a large, open-mouthed jar, to allow the free access of air. This maceration is continued twenty-four hours; the solution is then filtered and is ready for use. The preparation must be freshly made. Chemists have succeeded in extracting no active principle which is capable of producing the characteristic inflammation of the drug. In a preparation made as above described, if examined within a few days, there will be found large quantities of a bacillus, and Prof. H. Sattler in a paper published in the *Klin. Monatsbl. für Augenheilkunde*, June, 1883, attributes the inflammation to the bacilli, and the spores produced by them. Temperatures above 36° C. interfered with the development of the bacillus, and boiling makes the infusion useless. If, however, it is again exposed to the air, a weak and not very effective crop of bacilli develop themselves. The infusion, if allowed to stand, becomes thick and the odor changes from that proper to the jequirity to one of putrefaction, and then purifies itself, and if then used upon the conjunctiva is inocuous. Sattler succeeded in cultivating the bacillus in various soils, such as gelatinized blood serum, etc., and the cultivated bacilli after several generations produced an ophthalmia resembling in all particulars that produced by the original jequirity infusion.

A jequirity infusion made entirely free from spores, an ordinary jequirity infusion, and a pure crop of the specific bacillus, were each injected under the skin by this observer. In the first instance there was a mere temporary local swelling, but in the other two cases an abscess was produced containing cheese-like matter and large quantities of the bacillus. Thymol one part to 1,100 rendered the infusion useless. Corrosive sublimate one part to 1,100 prevented the development of the bacillus, but did not destroy the spores nor prevent the ophthalmia. Iodoform had no antiseptic action whatever. A somewhat similar bacillus is found in an infusion of peas, but it has not the action upon the conjunctiva produced by the jequirity infusion, and Sattler's conclusion is that there exists a widespread bacillus which acquires from the jequirity its specific action and retains this activity through succeeding generations. A series of eight cases occurred at this institution in which the drug either produced no inflammation, or a very slight one, and it was afterwards discovered that the apothecary had made the infusion in each case in a closed jar. These cases are not included in the table which follows. The method of application at this institution has been to give the patient a few drachms of the infusion and have him sop the eye with it for fifteen minutes, then the attendant would evert the lids and pass a camel's-hair brush wet with the infusion rapidly two or three times across the conjunctiva of both lids but this latter application after the ophthalmia has somewhat advanced is a painful operation, and, moreover, seems to be entirely unnecessary. The applications were made three times a day. Dr. Fourcher in *L' Union Méd. du Canada*, No. 9, 1883, advocates using the powdered drug dusted into the eye, but admits if any of the particles are allowed to remain in the eye disastrous results sometimes follow.

Jequirity ophthalmia, while resembling to a certain extent

an ordinary purulent ophthalmia, has some distinct differences. About three hours after the first application a watery discharge commences, and in the course of twelve hours this has very materially increased and become of a grayish color; at the end of twenty-four hours a delicate, smooth, thin, white membrane will be found spread over the palpebral conjunctiva and reflected somewhat upon the globe; this becomes thicker, and at the end of forty-eight hours peels off in thick shreds and patches. The membrane appears to be of a croupous character. Where no previous pannus existed the cornea frequently becomes covered with a thin, transparent gray film. The discharge is at this time profuse and thick with clotted pus. There is considerable œdema of the eyelids, often accompanied by photophobia and pain which latter often spreads up over the temporal region. The local inflammation is accompanied by a fever, having a rise of temperature of one degree Fahrenheit, and often connected with loss of appetite and dizziness. Immediately upon the discontinuance of the applications the severity of the symptoms abates, and the patient is generally very comfortable, both as to local and general condition, at the end of twenty-four hours. The ophthalmia is never communicated from one eye to the other. The recovery is progressive and at the end of ten days the lids are smooth and patients report that the feeling of roughness is all gone. If then discharged from the institution they invariably do well and report themselves six months afterward as perfectly well. If, however, they are retained in the institution five or six weeks longer they acquire what seems to be an entirely new crop of fresh exuberant granulations. The use of atropine seems to have a tendency to induce a return of the granular condition. The marked superiority of jequirity ophthalmia over inoculated purulent ophthalmia is due to the fact that in the former we require the stimulus of repeated applications to continue the inflamma-

tion, and that upon the discontinuance of these applications the onward course of the disease is immediately checked.

De Wecker and other writers on this subject state that there is no danger to the cornea from the use of this drug. This does not seem to be strictly true, if the drug is used upon all cases of granular lids, as they present themselves. The experience at this institution is, that out of twenty-four cases of jequirity ophthalmia treated in the year which this report covers, seven cases were followed by ulcerations of the cornea of a more or less serious character. These ulcerations, it is true, did not come on during the applications of the drug, but as they followed invariably in the cases in which there was the largest amount of corneal disturbance, and in those cases in which there was the largest amount of peri-corneal conjunctival chemosis, I think that the jequirity inflammation may be fairly assigned as the cause. These ulcers appeared in from two days to two weeks after the discontinuance of the applications, they were generally in groups, and marked by deep loss of substance, with clear-cut, clean facets; sometimes — although this was exceptional — they were preceded by grayish points of infiltration; they were generally above, and somewhat peripheral in situation, and in one case the ulcers perforated They in each and every case yielded to treatment, after a protracted course, without any disastrous consequences. The perforating ulcers were the only ones that left any dense corneal opacities. From an analysis of the cases, the causes of this corneal complication would seem to be, — 1st, A previous ulcerative tendency of the cornea of a serious character. 2d, Granulations of such an exuberant character that when the œdema of the lids is superimposed, the fulness of the lids produces a decided pressure upon the globe, and especially upon the cornea. 3d, When the ophthalmia produces excessive chemosis of the ocular conjunctiva. 4th, When the

cornea has received previous injuries from burns, lime, acids, etc. The above conclusions are in part drawn from a considerable number of cases treated in the house since Oct. , and consequently not included in this report. It would be well, in this connection, to remember that experiments upon rabbits are reported in which, by the continued use of strong infusions, necrosis of the cornea has been produced.

Cases 14 and 15 are second trials on cases previously enumerated as cases 4 and 5. Our experience of the repeated use of the drug is certainly not favorable. Cases 4, 5, and 6 had previously experienced burns of the cornea. It will be noticed in the above table that chronic cases were much more improved by the use of this drug than acute cases or chronic cases in a stage of acute exascerbation. If the cases which have been treated since Oct. 1 had been introduced into the table, the percentage of complete recoveries would have been very much higher, as latterly acute cases have been excluded from this method of treatment. All the cases that were discharged, well or improved, were written to six months after leaving the house; and, so far as heard from, reported themselves as well and engaged at their usual occupations. Benefit seems to be derived from this treatment by nearly all cases of true granulations, pannus, and papillary hypertrophy, following chronic inflammations. The cases in which it seems undesirable to use it are those in which danger to the cornea is apprehended from previous injuries or serious ulcerations; also in cases of acute florid granulations, with great fulness of the upper lid, as viewed externally. In these cases there is not only danger to the cornea from the pressure of the lids produced by the inflammation, but also this very pressure seems to prevent the inflammation from extending up the entire surface of the conjunctiva of the upper lid, for when the œdema has abated a border extending about

four millimetres from the edge of the lid will be found to be smooth, and from there back to the retro-tarsal fold the granulations will be seen to be untouched. Jequirity ophthalmia is certainly a very rapid method of clearing up a thick chronic pannus, and produces a satisfactory and permanent cure of chronic granulations and old papillary hypertrophy.

No.	Age.	Occupation.	Duration of Disease.	Time in house after applications of Jequirity.	Condition of Conjunctiva.	Pannus.	Vision before Treatment.	Vision after Treatment.	No. of Applications.	Corneal Complications.	Pain, Lachrymation, and other acute symptoms before application of Jequirity.	Result on Conjunctiva.	Result on Pannus.
1	39 years.	Domestic.	15 years.	21 days.	Fine red granulations.	Entire cornea opaque.	Vod. = 0.01	Vod. = 0.1	10	None.	None.	Smooth.	Nearly disappeared.
2	13 "	School-girl.	9 "	21 "	Large rough granulations.	Upper half of cornea opaque.	Vod. = 0.016 Vos. = 0.05	Vod. = 0.2 Vos. = 0.3	9	"	"	A few sharp granulations.	Entirely "
3	14 "	Domestic.	1 "	Developed rubeola in house.	Fine red granulations.	Thin grayish pannus of entire cornea.	Vod. = 0.1 Vos. = quantitative.	Vod. = 0.1 Vos. = 0.1	9	"	Considerable.	Smooth.	Nearly "
4	21 "	Rubber-worker.	6 "	Retained in house for a second trial.	Coarse red granulations	Thin grayish pannus of upper half of cornea.	Vos. = 0.1	Vos. = 0.05	10	"	Considerable, with swelling of upper lid.	Granulations remained.	Increased.
5	34 "	Mason.	15 months.	Retained in house for a second trial.	Fine red granulations.	Thin grayish pannus of upper half of cornea.	Vos. = 0.3 Vod. = 0.1	Vos. = 0.3 Vod. = 0.1	9	"	Great.	Not improved.	Not improved.
6	38 "	Shoemaker.	6 "	30 days.	Coarse granulat'ns.	Vascular pannus, upper half of cornea.	Vod. = 0.016	Vod. = 0.02	9	Small ulcer.	"	Granulations remained, but reduced in size.	Nearly disappeared.
7	34 "	Baker.	16 "	35 "	Coarse and fine granulations.	Upper half of cornea opaque.	Vos. = 0.1	Vos. = 0.6	9	None.	None.	Smooth.	Entirely "
8	26 "	Laborer.	4 years.	30 "	Coarse granulat'ns.	Thin gray pannus over entire cornea.	Vod. = 0.01	Vod. = 0.08	12	"	Slight.	"	" "
9	22 "	Domestic.	2 "	21 "	Fine "	Thin pannus, upper half of cornea.	Vod. = 0.1 Vos. = 0.008	Vod. = 0.4 Vos. = 0.1	9	"	None.	"	" "
10	10 "	School-girl.	4 "	14 "	" "	Dense pannus over upper half of cornea.	Vod. = 0.3 Vos. = 0.1	Vod. = 0.4 Vos. = 0.3	9	"	"	"	Nearly "
11	60 "	Housewife.	3 "	15 "	Coarse "	Thin grayish pannus over up'r half of cornea.	Vod. = 0.08	Vod. = 0.4	8	"	"	"	" "
12	38 "	Shoemaker.	7 months.	60 "	Fine red "	Thin grayish pannus of upper third of cornea.	Vod. = 0.1	Vod. = 0.3	8	Ulcer of cornea.	Great.	Some granulations remaining.	" "
13	34 "	Baker.	6 "	3 months.	" " "	Slight pannus above.	Vod. = 0.3	Vod. = 0.3	8	" "	"	do. do.	" "
14	21 "	Rubber-worker.	6 years.	5 "	Coarse red "	Thick pannus over centre of cornea.	Vos. = 0.05	Vos. = 0.05	8	" "	Considerable.	Granulations remained.	Not improved.
15	34 "	Mason.	15 months.	3 "	Fine red "	Vascular pannus over upper half of cornea.	Vos. = 0.3 Vod. = 0.1	Vos. = 0.1 Vod. = 0.05	9	Many ulcers of cornea, one of which perforated.	Great.	" "	Vascular pannus extended.
16	21 "	Weaver.	8 "	11 days.	Coarse whitish granulations.	Thin gray pannus, upper half of cornea.	Vod. = 0.1	Vod. = 0.3	9	None.	None.	Smooth.	Entirely disappeared.
17	22 "	Dyer.	1 year.	15 "	Old granulations.	Thin gray pannus, upper third of cornea.	Vos. = 0.1	Vos. = 0.2	9	"	"	"	" "
18	18 "	Mason.	18 months.	13 "	Fine "	None.			9	"	"	"	No pannus.
19	16 "	Orphan.	1 year.	25 "	Old "	None.			9	"	"	"	" "
20	50 "	Pauper.	5 years.	20 "	" "	Thick whitish pannus over upper half.	Vod. = 0.1 Vos. = 0.05	Vod. = 0.2 Vos. = 0.2	9 9	"	"	"	Pannus much thinner.
21	32 "	Housewife.	3 "	3 months.	Large, profuse red granulations.	Vascular pannus, upper half of cornea.	Vod. = 0.1	Vod. = 0.01	9	Several severe ulcers of cornea.	Great.	Granulations still remain.	Thickness and vascularity of pannus increased.
22	33 "	Mill hand.	2 "	19 days.	Old granulations.	Thin gray pannus, upper third of cornea.	Vos. = 0.1 Vod. = 0.2	Vos. = 0.3 Vod. = 0.4	9	None.	None.	Smooth.	Entirely disappeared.
23	18 "	Diver.	2 "	19 "	" "	do. do.	Vod. = 0.2	Vod. = 0.4	9	"	"	"	" "
24	51 "	Domestic.	1 "	In house.	Large, profuse red granulations.	do. do.	Vod. = 0.2	Vod. = 0.1	9	Several small ulcers of cornea.	Great.	Granulations still remain.	Increased.

FIFTY-NINTH

ANNUAL REPORT

OF THE

MASSACHUSETTS CHARITABLE

EYE AND EAR INFIRMARY,

FOR THE YEAR

1884.

BOSTON:
ALFRED MUDGE & SON, PRINTERS,
No. 24 Franklin Street.

OFFICERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary,

1884-85.

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AURAL EXTERNES.

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HENRY L. MORSE, M. D.

GEORGE STEDMAN, M. D., *Superintendent.*
ELIZA M. WHITFORD, *Matron.*

REPORT OF THE MANAGERS

OF THE

Massachusetts Charitable Eye and Ear Infirmary.

1884.

In behalf of the managers of the Massachusetts Charitable Eye and Ear Infirmary we herewith present the report of the surgeons for the year ending Sept. 30, 1884. The number of house patients for the year was 632, and of out-patients 10,395. By this it will be seen that the number of out-patients, as well as of those received into the Infirmary as house patients, again shows a large increase over those recorded last year. Every effort has been made to exclude such cases as were not worthy of charitable treatment, but in the out-department particularly, it is very difficult to separate the deserving poor from those who ought to pay a reasonable sum. In view of the general business depression, the managers have used every endeavor to keep the expenses down to a point within their income, and it is very gratifying to state that they have been able to get through the year without making further inroads upon their capital, notwithstanding the fact that the number of patients treated shows an increase of about twenty per cent. It is mainly through the liberal appropriation made annually by the Legislature that this large number of patients can be cared for. The money is well expended in returning to their vocation a large number

of worthy people who would otherwise become a burden upon the community. There are at present sixty beds in the wards, most of which have been occupied. We shall not be able to use all our beds, ninety in number, until we shall have received a very considerable addition to our present income. In the last annual report there was an account given of a new and valuable remedy called jequirity, its Brazilian name, used in the treatment of granular lids. Since the close of our statistical year, our staff of surgeons has employed a new anæsthetic for temporarily destroying the sensibility of the eye during an operation. It is a preparation from the well-known coca plant, called muriate of cocaine, an effective remedy, supplying, in many cases, the place of sulphuric ether. Your managers gratefully acknowledge the receipt of donations during the year amounting to $1,750.

R. W. HOOPER.
R. WOLCOTT.
N. THAYER.

REPORT OF THE SURGEONS.

To the Managers of the Massachusetts Charitable Eye and Ear Infirmary,

For the Year ending October 1, 1884.

Gentlemen, — The surgeons of the Infirmary herewith present their report of the medical and surgical work performed during the year ending Sept. 30, 1883.

The whole number of patients applying has been	11,027
Preceding year	9,929
An increase this year of	1,098

or about twenty per cent in the house patients and in the out-patients.

Boston supplies more than one half of the number, and the rest of Massachusetts the remainder, with the exception of a few hundred from the other New England States.

There is an increase of twenty-five per cent in the number of operations performed, as seen by the accompanying statistics; as also in the cataract cases, by the tabulated list appended as usual.

The steady increase of the number of patients with troubles of accommodation or retraction of the eye shows that the industrial classes are learning to appreciate the value of the Infirmary in this direction. These cases add much and increasing labor to the work of the insti-

tution on the part of the surgeons and internes. It is, however, a charitable labor well expended, as it helps to instruct the artisan classes as to the need and use of glasses for their children as well as themselves, and serves the equally important purpose of keeping them out of the hands of the increasing tribe of spectacle venders and charlatans.

Whilst the charity of special hospitals is more particularly apt to be imposed upon, it is somewhat discouraging to see the personnel of our waiting-room often not greatly varying from that of any physician in active practice. The Infirmary is particularly open to such attempts at imposition, and the number of persons able to pay a fee, and who must be eliminated in order to confine the charity to its legitimate use, continues to throw additional daily labor upon the surgeons.

The employment of a non-professional recording clerk has worked satisfactorily to all concerned.

HASKET DERBY.
HENRY L. SHAW.
F. P. SPRAGUE.
B. JOY JEFFRIES.
ROBERT WILLARD.
CLARENCE J. BLAKE.

STATISTICS.

October 1, 1883, to October 1, 1884.

Classification of Patients, Diseases, and Operations.

House Patients.

Eye Patients: —			
Males		389	
Females		225	
			614
Ear Patients: —			
Males		12	
Females		6	18
Total House Patients			632

Out-Patients.

Eye Patients: —			
Males	3,972		
Females	3,538		
		7,510	
Ear Patients: —			
Males	1,565		
Females	1,320	2,885	10,395
Total number of patients			11,027

Residents of Boston	5,760
" other parts of Massachusetts	4,663
" Maine	222
" New Hampshire	136
" Vermont	59
" Rhode Island	24
" Connecticut	28

Residents of other States	59
" British Provinces and foreign countries	70
" Unrecorded	6
	11,027

Diseases of the Eye.

Lids.

Blepharadenitis	340
Lippitudo	6
Hordeolum	67
Ectropium	7
Entropium	7
Trichiasis	43
Symblepharon	5
Œdema	14
Abscess	37
Chalazion	147
Cyst	3
Verruca	7
Tumor	8
Nævus	4
Ptosis	16
Epithelioma	7
Herpes	1
Cellulitis	9
Enchondroma	1
Epicanthus	1
Ephidrosis	1
Pediculus	1
Eczema	22
Cut of brow	2
Abscess of brow	5
Ecchymosis of lid	4
	765

Conjucntiva.

Conjunctivitis, catarrhal	1,223
" diphtheritic	2
" blenorrhoic	17
" " neonatorum	28
" granular	157
" " with pannus	65
" " phlyctenular	333
" traumatic	15
" strumous	8
Ophthalmia, gonorrhœal	9
Chemosis	4
Ecchymosis	44
Pterygium	50
Pinguecula	7
Foreign body on	46
Cyst	2
Hyperæmia of	14
Serous effusion into	1
Fungus granulations	2
	2,027

Cornea and Sclera.

Keratitis	181
" phlyctenular	20
" interstitial	7
" traumatic	18
Kerato-iritis	24
Ulcer of cornea	401
" " vascular	51
" " traumatic	22
" " serpens	23
Abscess of cornea	12

Abrasion of cornea	39
Rupture of "	4
Staphyloma anterior	15
Foreign body on cornea	688
Leucoma	193
Inflamed leucoma	31
Foreign body on sclera	5
Sclero-keratitis	20
Episcleritis	1
Scleritis	21
Keratoconus	2
Lead deposit	6
Wound of cornea	25
	1,809

Iris and Ciliary Body.

Iritis	165
" syphilitic	25
" traumatic	9
Prolapse of iris	3
Mydriasis	20
Hernia of iris	6
Posterior synechiæ	20
Anterior "	15
Irido-cyclitis	3
Wound of ciliary body	7
Ciliary redness	21
Hypopion	17
Hemorrhage into anterior chamber	10
Ciliary irritation	2
Iridodoneses	5
Iridodialysis	2
	330

Choroid.

Choroiditis	33
" specific	2
Posterior staphyloma	11
Sclerotico-choroiditis posterior	15
Irido-choroiditis	7
Glaucoma	34
Panopthalmitis	3
Atrophy	1
	106

Retina.

Retinitis	4
" albuminurica	8
" apoplectica	7
" pigmentosa	7
Punctata	3
Hemeralopia	3
Neuro-retinitis	6
Separation of retina	34
Disease of macula lutea	4
Hemorrhage into macula lutea	1
Embolism central artery	1
	78

Optic Nerve.

Neuritis	40
Atrophy	53
Anæmia of disc	3
Hyperæmia	5
	101

Vitreous.

Opacities	15
Hemorrhage	3
	18

Lens.

Cataract, mature	88
" incipient	133
" congenital	11
" traumatic	54
" capsular	3
" posterior polar	8
" cretaceous	1
Dislocation of lens	8
	306

Lesions of Globe and Orbit.

Xerophthalmia	1
Microphthalmus	1
Hydrophthalmus	1
Exophthalmus	4
Phthisis bulbi	33
Rupture of globe	16
Foreign body in anterior chamber	4
" " eyeball	8
Periostitis of orbit	3
Disorganized globe	11
Intraocular tumor	6
	88

Refraction and Accommodation.

Myopia	182
Hypermetropia	620
Astigmatism	214
Presbyopia	86
Asthenopia	54
Paralysis of accommodation	8
Spasm "	3
	1,167

Muscular Affections and Neuroses.

Paralysis, facial	4
" third	22
" fourth	1
" sixth	7
Diplopia	14
Strabismus convergens	137
" divergens	21
Ciliary neuralgia	1
Insufficiency of internal recti	6
Blepharospasm	20
Neuralgia, supra-orbital	11
Nystagmus	22
Nictitation	3
Nyctalopia	2
	271

Lachrymal Apparatus.

Epiphora and obstruction of the lachrymal ducts	173
Catarrh lachrymal sac	47
Eversion of punctum	4
Abscess of lachrymal sac	57
Lachrymal fistula	2
	283

General Injuries.

Blows and cuts	102
Burns	43
	145

Miscellaneous.

Unfit	375
Unrecorded	12

No disease	30
No diagnosis	66
Eloped	20
Referred to other institutions	27
	530

Affections of Percipient Apparatus.

Amblyopia	28
" ex abusu	20
Muscæ volitantes	16
Scotoma	6
Hemiopia	1
Photophobia	2
	73

Summary of Eye Diseases.

Lids	765
Conjunctiva	2,027
Cornea and sclera	1,809
Iris and ciliary body	330
Choroid	106
Retina	78
Optic nerve	101
Vitreous	18
Lens	306
Lesions of globe and orbit	88
Refraction and accommodation	1,167
Muscular affections and neuroses	271
Lachrymal apparatus	283
General injuries	145
Unfit, unrecorded, etc.	530
Affections of percipient apparatus	73
Total	8,097

STATISTICAL REPORT OF THE DISEASES OF THE EAR.

Oct. 1, 1883, to Oct. 1, 1884.

Abscess of lobe	1
" behind lobe	1
" of meatus	3
Aspergillus	1
Atresia of meatus following otitis media purulenta	5
Congenital malformation of auricle	2
Deaf-mutism	21
Deformity of auricle from blow	1
Destruction membrana tympani	1
Eczema, auricle and meatus	15
" post-aural	6
Exostosis, meatus	2
Foreign body, meatus	14
Furuncle, meatus	11
Hæmatoma	1
Obstruction of meatus, cerumen	496
Otitis externa circumscripta	72
" " diffusa	52
" media purulenta chronica	627
" " " with abscess post-aural	14
" " " " carious bone	4
" " " " polypus	52
" interna	14

Otitis media acuta	231
" " " with serous accumulation	20
" " chronica catarrhalis	742
" " subacuta	35
" " catarrhalis tubalis	14
" " purulenta acuta	106
Other diseases	50
Otalgia neuralgica	34
Tinnitus aurium	11
Traumatic rupture, membrana tympani	3
Unfit	181
Unrecorded	48
	2,891

Out-Patients.

Whole number of ear patients	2,885
Residents of Boston	1,470
" other parts of Massachusetts	1,288
" Maine	50
" New Hampshire	30
" Vermont	10
" Rhode Island	3
" Connecticut	5
" other States	11
" British Provinces and foreign countries	17
Unrecorded	1
	2,885

Ear Patients: —

Males	1,565	
Females	1,320	
		2,885

OPERATIONS ON THE EYE.

Lens.

Extraction senile cataract, Græfe up	89
" other than senile cataract, Græfe up	3
" traumatic cataract, suction	12
" " " Liebreich	1
" " " Linear	2
Discission, congenital "	4
" traumatic "	3
Linear congenital	1
	115

Lens Capsule.

Agnew's operation	8
Divided with De Wecker's scissors	2
Other capsule operations	13
	23

Iris.

Iridectomy for glaucoma	13
" " preparatory to cataract operation	6
" " artificial pupil	15
" " lamellar cataract	9
" " irido-choroiditis	1
" " anterior staphyloma	1
Excision of hernia of iris	3
	48

Cornea.

Removal of foreign body	692
Saemisch's operation for ulcus cornea serpens	7
Excision of epithelial tumor	1

Paracentesis	7
Tattooing	1
Excision of anterior staphyloma	4
	712

Conjunctiva.

Desmarres's operation for pterygium	9
Excision of pterygium	2
Peritomy	1
Plastic operation	2
Excision of fungous granulations	1
	15

Muscles.

Tenotomy of interual rectus for strabismus convergens	83
" external rectus for strabisimus divergens	4
	87

Lids.

Excision of cuticle of upper lid for ptosis	3
Green's operation for trichiasis	24
Snellen's " " "	4
Arlt's " " "	2
Canthoplasty	2
Chalazion	54
Incision of abscess	11
Plastic operations	9
Alloplasty	1
Stretching of lids for blepharospasm	2
Excision of tumor	1
" " cyst	2
" " nævus	1

Excision of granulations	1
" " epithelioma	1
Electrolysis of nævus	1
	119

Miscellaneous.

Enucleation of eye for sympathetic ophthalmia, present or threatened	46
Removal of anterior portion of globe	6
" " steel from anterior chamber with electro-magnet	5
Removal of other foreign bodies from the anterior chamber	3
Removal of steel from the globe with the electro-magnet	3
Removal of foreign bodies from the sclera	3
Incision of abscess of lachrymal sac	32
" " globe for panophthalmitis	2
" " conjunctiva for chemosis	1
Removal of dislocated lens	4
Bowman's operation	95
	200

Summary.

Operations on the lens	115
" " " capsule	23
" " " iris	48
" " " cornea	712
" " " conjunctiva	15
" " " muscles	87
" " " lids	119
Miscellaneous	200
	1,319

STATISTICS OF DISEASES OF HOUSE PATIENTS FROM OCT. 1, 1883, TO OCT. 1, 1884.

Lids.

Chalazion	1
Lippitudo	1
Epithelioma	1
Blepharitis	2
Eczema	1
Ectropion	13
Trichiasis	11
Symblepharon	6
Ptosis	1
	38

Conjunctiva.

Conjunctivitis, catarrhal, acute	7
" blenorrhic	7
" granular	31
" " with panus	66
Ophthalmia, gonorrhœal	5
" strumous	2
Pterygium	2
	120

Cornea and Sclera.

Keratitis vascular	1
Keratitis	18
" phlyctenular	1
" interstitial	5
" traumatic	2
" strumous	2
Kerato-iritis	2

Ulcer of cornea	26
" " " vascular	2
" " " traumatic	11
" " " serpens	17
Abscess of "	5
Rupture " "	7
Staphyloma, anterior	8
Kerato konus	1
Epithelioma of cornea	1
Leucoma	16
Sclero-keratitis	2
Scleritis	1
Staphyloma anterior sclerotic	2
Foreign body cornea	5
" " sclera	1
	136

Iris and Ciliary Body.

Iritis	7
" syphilitic	13
" traumatic	1
" rheumatic	6
" serous	3
Posterior synechiæ	1
Anterior "	1
Occluded pupil	4
	36

Choroid.

Sclerotico-choroiditis posterior	4
Irido-choroiditis	5
Glaucoma	15
	24

Retina and Optic Nerve.

Neuritis	1
Neuro-retinitis	1
	2

Lens.

Cataracts, hard and soft	112
" congenital	7
" traumatic	26
" capsular	17
" lamellar	6
	168

Lesions of Globe aad Orbit.

Phthisis bulbi	13
Foreign body in anterior chamber	3
Hemorrhage into vitreous	2
Epiphora	2
Abscess lachrymal sac	2
Post ocular abscess	1
Intra ocular tumor	3
Panophthalmitis	7
Disorganized globe	10
	43

Muscles of the Eye.

Strabismus convergens	1
" divergens	1
Diplopia	1
	3

General Injuries.

Blows and cuts	30
Burns	7
	37

Unrecorded or no disease	6
Asthenopia	1
	7

Disease of the Ear.

Deaf-mutism	1
Otitis media acuta	1
" " chronica catarrhalis	2
" " purulenta	11
" " " with mastoid abscess	1
" " " meningites	1
" " " polypus	1
	18

Total males	401
" females	231
	632

STATISTICS OF NINETY-FIVE OPERATIONS FOR EXTRACTION OF SENILE CATARACT BY VON GRÆFE'S METHOD UPWARDS.

By the Ophthalmic Staff during the year ending Aug. 31, 1884.

COMPILED BY B. JOY JEFFRIES, M. D.

The details of ten additional operations for cataract, *other than senile*, are given in a separate table, as each is a case by itself.

Of these ninety-five cataract patients, fifty-two were males and forty-three females. Forty-two were American born and fifty-three foreign. Their ages were from forty to eighty-seven years. Ether was given in eighty-one; no ether in fourteen cases. The new anæsthetic, cocaine, was not employed till after Sept. 1, 1884, when the year was up. The average time in the Infirmary was between two and three weeks.

The resulting vision is as follows: —

Vision .9,	1	Vision $\frac{4}{60}$	2	Quantitative perception of light with possible improvement by secondary operation . .	8
" .7,	2	" $\frac{3}{60}$	1		
" .6,	1	" $\frac{2}{60}$	1		
" .5,	2	Fingers 50 c. m. . . .	1	No record of vision, but no proof of loss . .	3
" .4,	16	" 10 c. m. . . .	1		
" .3,	15	" 1 m.	2	Total loss	3
" .2,	17	Sees to go about . . .	2		
" .1,	16	No record, but known to be good	1		
Success	70	Partial success . . .	11		14
	11				
	14				
	95				

Only one secondary operation had been done. This is often necessary, and its future application will no doubt bring up many of the partial successes, as also some of the other cases, into the category of success, viz., vision one tenth of the normal. Such future improvement cannot naturally be recorded in the *annual* report. Of the total losses, No. 82, the wound healed well, and the lack of vision was due apparently to previous spinal trouble and paralysis. No. 86, purulent inflammation started from within the eye. No. 88, the record is not complete, but the scoop was used.

Whilst the total loss is not large, there are many cases in the list in which semi-fluid vitreous, iritis, or conjunctivitis complicated the operation or healing process. From various reasons, the individual records are unfortunately incomplete. Ignorance and stupidity amongst the class of patients operated on rendered them particularly intractable and restless. Tearing off bandages and roaming about can hardly be prevented by any available amount of watching or care.

STATISTICS OF NINETY-FIVE OPERATIONS FOR SENILE CATARACT BY THE METHOD OF GRÆFE UPWARDS, PERFORMED AT THE INFIRMARY FROM SEPT. 1, 1883, TO SEPT. 1, 1884.

No.	Sex, Age, Nationality.	General Health.	Charaeter and Duration of Cataraet.	Funetional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Seeondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	F 67 Ireland.	Fair.	Senile. 5 years.	Normal. Cornea .0115.	Sept. 6, 1883. Ether. O. S. Iritis third day.	45 days.	0.4
2	F. 68 Am.	Good.	Senile. 2 years.	Normal. Cornea .011.	Sept. 13, 1883. Ether. O. S.	30 days.	0.4
3	F. 70 Am.	Fair.	Senile.	Normal. Cornea .011.	Sept. 13, 1883. No ether. O. S.	21 days.	0.2
4	F. 70 N. B.	Good.	Senile.	Normal. Cornea .011.	Sept. 15, 1883. Ether. O. D.	41 days.	.4 Sn. 2.50
5	M. 59	Good.	Senile. 1 year.	Normal. Cornea .011.	Sept. 20, 1883. Ether. O. S.	23 days.	.4
6	M. 76 England	Good.	Senile. 1 year.	Normal.	Sept 19, 1883. Ether. O. D. Patient very restless, tore off bandage and out of bed repeatedly. Chloral. Some cortical in pupil. To return for secondary.	22 days.	Quantitative.

7	F. 70 Ireland.	Good.	Senile. 1 year.	Normal. Cornea .012.	Sept. 20, 1883. Ether. O. D.	41 days.	.3
8	F. 66 Ireland.	Fair.	Senile. 2 years.	Normal. Cornea .012.	Sept. 20, 1883. Ether. O. D.	32 days.	.4
9	F. 54 Ireland	Good.	Senile. 3 years.	Normal. Cornea .011.	Sept. 22, 1883. Ether. O. D.	27 days.	.3
10	F. 66 Am.	Good.	Senile.	Normal. Cornea .011.	Oct. 4, 1883. No ether. O. S.	18 days.	.10 Sn 1.25
11	M. 55 Ireland.	Good.	Senile.	Normal. 1 post. Syn. Cornea .012.	Oct. 4, 1883. No ether. O. S. Secondary, Sept. 8, 1884.	18 days.	0.3
12	M. 70 England	Good.	Senile. 2 years.	Normal. Cornea .0115.	Oct. 5, 1883. Ether. O. S.	21 days.	0.3
13	M. 43 Am.	Good.	Senile. 1 year.	Normal. Cornea .011.	Oct. 9, 1883. Ether. O. S. Vitreous. Scoop. Hypopion and chemosis. Pupil cloudy at time of discharge. After four months V = .1. Vitreous very fluid and presented on completion of iridectomy.	41 days.	0.1

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
14	F. 70 Am.	Fair.	Senile. 10 years.	Normal. Cornea .011.	Oct. 10, 1883. No ether. O. D. Patient quiet till attempt to remove cortical. Then little vitreous. Movement of eye on excising this; gush of vitreous. Cortical in pupil. Secondary op. advised.	27 days.	0.1 Sn. 2.25.
15	F. 42 Am.	Very poor.	Senile. 2 years.	Normal Cornea .0115.	Oct. 11, 1883. Ether. O. S. Conjunc bleeding profuse, lasting several days. Pt struck eye fifth day, causing much pain and tenderness.	23 days.	0.9 Sn. 0.5
16	F. 70 Am.	Fair.	Senile. 2 years.	Normal. Cornea .0115.	Oct. 16, 1883. Ether. O. D.	44 days.	0.1
17	F. 70 Am.	Poor.	Senile. 2 years.	Normal. Cornea .012.	Oct. 19, 1883. Ether. O. S. Conjunc. hæmorrhage profuse. Some iritis. Syn. post.	15 days.	0 2 Sn. 1.00
18	M. 59 Ger.	Good.	Senile. 4 years.	Normal. Cornea .0115.	Oct. 23, 1383. Ether. O. S.	27 days.	0.3. Sn. 1 25
19	M. 54 Am.	Good.	Senile. 8 years.	Normal.	Oct. 25, 1883. Eserine. Ether. O. D Lens had to be removed with scoop. Pupil was blocked with cortical which absorbed and gave very good vision, which suddenly fell off twenty-eighth day with blood in ant. chamber. Quantitative vision improved in four months to finger at 50 Cm. To return for secondary operation.	41 days.	Figures at 50 Cm.

20	F. 56 Ireland.	Good.	Senile. 6 years.	Normal. Cornea .011.	Oct. 25, 1883. Eserine. Ether. O. D. Operation normal.	17 days.	0.4 Sn. 50
21	M. 71 Am.	Good.	Senile. 5 years.	Normal. Cornea .011.	Oct. 27, 1883. Ether. O. S.	42 days.	$\frac{4}{60}$
22	F. 50 Ireland.	Good.	Senile.	Normal. Cornea .0115.	Oct. 29, 1883. Eserine. Ether. O. D. Slight iritis.	23 days.	0.1 Cannot read.
23	F. 61 Am.	Fair.	Senile. Mature.	Normal. Cornea .115.	Oct. 30, 1883. Ether O. S. Iridectomy four weeks previous, as patient's only eye.	20 days.	0.1
24	M. 69 Am.	Good.	Senile. 3 years.	Normal Cornea .012.	Nov. 1, 1883. Ether O. S. Slight iritic trouble.	18 days.	0.1
25	F. 50 Fayal.	Fair.	Senile. 3 years.	Normal. Cornea .01.	Nov. 14, 1883. No ether. O. D. Eserine. Knife introduced back up but easily turned in the wound. Iris folded over knife and cut. Large lens emerged with difficulty. Some capsule left. Subsequent œdema of lids and chemosis. Lens swelled and pupil closed. Struck eye a violent blow during convalescence. To return for iridectomy.	28 days.	Quantitative.
26	M. 58 Am.	Good.	Senile. 5 years.	Normal. Cornea .011.	Nov. 13, 1883. Ether. O. S. Did well till seventh day; then iritis and hæmorrhage into ant. chamber. Repeated three times. Pupil obstructed.	26 days.	Fingers at 1 M.

No.	Sex, Age, Nationality.	General Health.	Charaeter and Duration of Cataraet.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Seeondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
27	M. 51 England	Good.	Senile. 1 year.	Normal. Cornea 0115.	Nov. 18, 1883. Ether. O. S. Cut irregular. A mild iritis followed. At upper and outer portion of cornea, near iridectomy, slight dialysis of iris.	23 days.	0.4
28	M. 74 Ireland	Fair.	Senile. 3 years.	Normal. Cornea 0115.	Nov. 30. Ether. O. S. Operation normal. In twenty-four hours purulent and slough of cornea, etc.	30 days.	Quantitative.
29	F. 72 Am.	Good.	Senile. 2 years.	Normal. Cornea .0115.	Dec. 12, 1883. Ether. O. D.	19 days.	.3 Sn. 1.25
30	F. 48 Am.	Poor.	Not traumatic. 2 years.	Normal. Nystagmus. Cornea .0115.	Dec. 12, 1883. Ether. O. S. Slight conjunctivitis.	25 days.	.4
31	M. 59 Am.	Good.	Senile. 1 year.	Normal. Cornea .012.	Dec. 13, 1883. Ether. O. D.	18 days.	.1 Sn. 1.5
32	F. 46 Am.	Fair.	Senile. 3 years.	Normal. Cornea .0115.	Dec. 17, 1883. Ether. O. D. Cut quite corneal.	20 days.	.7
33	F. 77 Am.	Good.	Senile. 8 years.	Normal. Cornea .0115.	Dec. 18, 1883. Ether. O. D.	17 days.	.2 Sn. .8.

34	M. 65 Ireland	Good.	Senile. 8 months.	Normal. Granular lids been treated. Cornea .012.	Jan. 1, 1884. Ether. O. D.	36 days.	.1
35	M. 44 Ireland.	Good.	Senile. 10 months.	Normal. Cornea .0115.	Jan. 15, 1884. Ether. O. S.	15 days.	.4
36	M. 72 England	Good, except Rh'u'tism.	Senile. 9 years.	Cornea .011. Percep and projection, fail downwards.	Jan. 27, 1884. Ether. O. S. Morgagnian. Small nucleus. Fluid cortical.		0.3
37	M. 56 Am.	Poor.	Senile. 3 years.	Normal. Cornea .012.	Jan. 31, 1884. O S.	29 days.	0.3
38	M. 58 Am.	Poor.	Senile. 1 year.	Normal.	Feb. 13, 1884. O. D. Other eye has been operated on.	16 days.	0.2
39	M. 63 Ireland.	Good.	Senile.	Normal. Cornea .012.	Feb. 8. 1884. O D.		0.1
40	F. 65 Am.	Fair.	Senile.	Normal. Cornea .010.	Feb. 8, 1884. O. S.	17 days.	0.2
41	M. 59 Am.	Good.	Senile.	Normal. Cornea .0105.	Jan. 22, 1884. O. D.		$\frac{4}{60}$

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
42	M. 71 Am.	Good.	Senile.	Normal. Cornea .0115.	—— —, 1884. O. S.		0.2
43	F. 64 Ireland.	Good.	Senile	Normal. Cornea .015.	—— —, 1884. O. D. Tore off bandage. Has to set up with asthma. Lids swelled. Muco pur. discharge.		
44	M. 68 Ireland.	Good.	Senile.	Normal. Cornea .002.	March 4, 1884. No ether. O. D. Scoop and considerable loss of fluid vitreous.	24 days.	0.1
45	M. 88 Am.	Good.	Not traumatic. 2 years.	Normal. Cornea .0115.	March 7, 1884. Ether. O. S.	21 days.	.3 Sn. 1 50.
46	F. 60 Ireland	Good.	Senile. 2½ years.	Normal. Cornea .0115.	March 7, 1884. Ether. A. S. Slight iritis.	26 days.	.2
47	F. 58 Ireland.	Good.	Senile 1 year.	Normal. Cornea .0115.	March 15, 1884. O. S. No ether. Eserine. Normal operation.	14 days.	.4
48	F. 58 Am.	Patient has nephritis and dropsy.	Senile 1 year.	Normal. Cornea .011.	March 15, 1884 O. S. No ether. Eserine. Lens sticky. Scoop. No vitreous. Slight prolapse of iris.	16 days.	.4 Reads 0.6.

49	M. 54 Ireland.	Good.	Senile. 6 months.	Normal. Cornea .0115.	March 17, 1884. Ether. O. S.	22 days.	.6
50	F. 62 Am.	Fair.	Senile. 23 years.	Normal. Cornea .0115.	March 19, 1884. O. D. Ether by request. Eserine. Much opaque capsule left.	19 days.	.2 Reads 0.5.
51	M 63 Ireland.	Good.	Senile. 2 years.	Normal. Cornea .012.	March 29, 1884. Ether. O. S. Mild iritis.	27 days.	.1
52	M. Am.	Good	Senile. 3 years.	Normal. Cornea .012.	April 5, 1884. Ether. O. S.	42 days.	Fingers at 10 Cm.
53	F. 75 Am.	Poor.	Senile. 2 years.	Normal. Cornea .012	April 16, 1884. Ether. O. S. Normal to eighth day, then infiltration round wound and gradual sloughing without pain.		
54	M. 70 Ireland.	Good.	Senile. 4 years.	Normal. Cornea .0125.	April 22, 1884. Ether. O. D.		0.1
55	M. 61	Good. Rheumat.	Senile. 6 years.	Normal. Cornea .012.	April 22, 1884. Ether. O. D. Capsule left in pupil.	17 days.	0.2
56	F. 87 Ireland.	Fair.	Senile. 2 years.	Normal. Cornea .0115.	April 23, 1884. Ether. O. S. Eserine. Conjunctiva friable. Seventh day cornea hazy; much redness; no chemosis. Fifteenth day. Pupil blocked. No ant. chamb. No pain from first.	21 days.	Perception light.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operation. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
57	F. 72 Am.	Good.	Senile 8 months.	Normal. Cornea .0012.	April 30, 1884. No ether. O. S. Eserine. Shallow ant. chamb. Knife caught in iris, producing slight dialysis. Small pupil contracted upwards.	17 days.	0.5 Reads 0.5
58	M. 43 England	Good.	Senile. 1 year.	Normal. Cornea .0115.	April 26, 1884. Ether. O. D. Some redness and tenderness during healing.	16 days.	0 4
59	F. 85 Am.	Fair.	Senile. 8 years.	Normal. Cornea .0115.	May 10, 1884. Ether (by request). O. S. Eserine. Some cortical or capsule left in pupil. Eleventh day. Some iritis. Patient reports can see to "go about house and do a little work."	27 days.	?
60	M. 49 Am.	Fair.	Senile. 3 years.	Normal. Cornea .0112.	May 6, 1884. Ether. Normal.	17 days.	0.3
61	F. 55 Ireland.	Poor.	Senile. 3 years.	Normal. Eye prominent. Disease O. D.	May 20, 1884. Ether. O. S. Vitreous and small nucleus removed by scoop. Pupil filled with soft cortical.		0 2
62	M. 75 Ireland.	Fair.	Senile. 2 years.	Normal. Cornea .0115.	May 22, 1884. Ether by request O. D. Great corneal collapse. Normal operation.	15 days.	0.4 Reads 0.5.

63	M. 70 Ireland.	Fair.	Senile. 2 years.	Normal. Cornea .0112.	May 22, 1884. No ether. O. D.		0.3
64	M. 60 Ireland.	Good.	Senile. 18 months.	Normal. Cornea .0115.	May 23, 1884. Ether. O. D.		
65	M. 54 Canada.	Good.	Senile. 2 years.	Normal. Cornea .0112.	May 23, 1884. Ether. O. S.	13 days	0.4
66	F. 71 Am.	Good.	Senile. 18 months.	Normal. Cornea .0111.	May 17, 1884. No ether. O. D. Patient eloped before vision was tested.	14 days.	Able to go about.
67	M. 72 Am.	Good.	Senile. 2 years.	Normal. Cornea .0112.	May 30, 1884. Ether. O. D.	17 days.	0.2
68	M. 76 England	Good.	Senile. 2 years.	Normal. Cornea .0112.	May 30, 1884. Ether. O. D.	17 days.	0.5
69	M. 67 Am.	Fair.	Senile. 2 years.	Normal Cornea .0113.	June 3, 1884. Ether. O. S. Some subsequent iritis.	36 days.	0.1
70	M. 45 Am.	Good.	Senile. 2 years.	Normal. Cornea 0.112.	June 5, 1884. Ether. O. S. Sticky lens. Scoop; some vitreous. Some cortical in ant. chamber produced irritation. O. D. Enucleated five months before with piece iron in it eight years.	32 days.	0.1

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
71	F. 82 Am.	Good.	Senile. 2 years.	Normal. Cornea 0.112.	June 4, 1884. Ether. O. S.	14 days	0 2
72	F. 76 Am.	Fair.	Senile. 3 years.	Normal. Cornea .0114.	June 5, 1884. Ether. O. D. Lens sticky, but no vitreous lost Mild but persistent conjunctivitis. Pupil filled with dark colored mass. Perception light. Second week improving. Patient homesick. To return.	13 days.	Percept. light.
73	M. 73 Am.	Fair.	Senile. 6 years.	Normal. Cornea 0.115.	June 5, 1884. Ether. O. S. Cornea greatly collapsed. Lens small. Little cortical removed. Capsule each side of ant. chamber could not be grasped. Patient childish, removing bandage. Low, serous iritis sixth day. Ant. chamber filled with organized material. Wound has opened. Ant. chamber evacuated twelfth day.	16 days	Good percep. light.
74	M. 73 Ireland	Fair.	Senile. 18 months.	Normal. Cornea 0.112.	June 11, 1884. Ether. O. S. Scoop twice. Sixth day, low persistent serous iritis. Patient feeble.	34 days.	$\frac{3}{60}$
75	M. 75 Ireland.	Fair.	Senile. 3 years.	Normal. Cornea 0.115.	June 26, 1884. O D. Lens pale	39 days.	0.4

76	M. 70 Am.	Good.	Senile. 3 years.	Normal. Cornea 0.115.	July 16, 1884. Ether. O. S.	20 days.	Vision good. Not recorded.
77	M. 75 Ireland.	Fair.	Senile. 1 year.	Normal. Cornea 0.115.	July 15, 1884. Ether. O. S. Considerable collapse of cornea.	20 days.	0.3
78	M. 39 Am.	Good	3 years.	Normal. Cornea 0.113.	July 17, 1884. Ether. O. D. Seventh day some capsule in pupil.	18 days.	0.2
79	F. 57 Ireland.	Good.	Senile.	Normal. Cornea 0.115.	July 24, 1884. Ether. O. S.	39 days.	0.3
80	F. 45 Ireland	Good.	Senile. 1 year.	Normal. Cornea 0.112.	July 26, 1884. Ether. O. S. Pupil filled with cortical dissolving at time of discharge.		Fingers 1 M.
81	F. 63 Ireland.	Poor.	Senile. 3 years.	Normal. Cornea .0115.	July 26, 1884. Ether. O. S.		.2
82	M. 66 England	Poor.	Senile. 2 years.	Projection poor.	Aug. 7, 1884. Ether. O. S. Wound healed well. Both legs paralyzed. History of some previous spinal trouble.	11 days.	0
83	F. 55 Ireland.	Poor.	Senile. 2 years.	Normal. Cornea .0112.	Aug. 6, 1884 Ether. O. S.	16 days.	0.3

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Socondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
84	M. 58 Ireland.	Good.	Senile. 1 year.	Normal. Cornea .012.	Aug. 9, 1884. No ether. O. S.	19 days.	0.2
85	F. 57 Ireland.	Good.	Senile. 2 years.	Normal. Cornea .011.	Aug. 12, 1884. Ether. O. D.	20 days.	0.2
86	F. 66 Ireland.	Good.	Senile. 1 year.	Normal. Cornea .0115.	Aug. 12, 1884. No ether. O. D. Fourth day pupil filled with stringy pus, forcing its way into wound. Great chemosis.	36 days.	0
87	F. 66 Ireland.	Good.	Senile. 3 years.	Normal. Cornea .0115.	Aug. 13, 1884. Ether. O. D. Iritis. Blocked pupil.	26 days.	Good perception light.
88	M. 66 England	Poor.	Senile. 2 years.	Poor. Cornea .011.	Aug. 19, 1884. Ether. O. D. Scoop.	18 days.	0
89	M. 69 Am.	Good.	Senile. 2 years.	Normal. Cornea .0115.	Aug. 21, 1884. Ether. O. D.	28 days.	0.2
90	M. 48 England	Good.	Senile. 2 years.	Normal. Cornea .012.	Aug. 21, 1884. Ether. O. S.	16 days.	0 4

91	M. 60 Ireland.	Good.	Senile. 1 year.	Normal. Cornea .0115.	Aug. 21, 1884. Ether. O. S.	31 days.	0.1
92	M. 75 Ireland.	Good.	Senile. 2 years	Normal. Cornea .0115.	Aug. 23, 1884. Ether. O. S. Vitreous presented. Scoop used. Patient restless. Walking about. Removes bandage. Seventh day, wound healing normally. Cortical and capsule in pupil.	16 days.	0.0
93	M. 72 Scot'ld.	Fair.	Senile. 2 years.	Normal. Cornea .112.	Aug. 23, 1884. Ether. O. D.	13 days.	0.3
94	F. 46 Am.	Good.	Senile. 3 years.	Normal. Cornea 0.11.	Aug. 30, 1884. Ether. O. D.	13 days.	0.7 Sn. 0.5
95	F. 67 Ireland.	Good.	Senile. 2 years.	Normal. Cornea .0115.	Aug. 30, 1884. Ether. O. S. Slight hernia of iris, excised and wound healed well.	20 days.	$\frac{2}{60}$

STATISTICS OF TEN OPERATIONS DONE FOR OTHER THAN SENILE CATARACT DURING THE YEAR ENDING SEPT. 1, 1884.

No.	Sex, Age, Nationality.	General Health.	Character and Duration of Cataract.	Functional Examination, and Condition of Eye.	Date and Method of Operating. Anæsthesia. Course of Healing Process. Treatment. Secondary Operation. Remarks.	Duration of Treatment.	Resulting Vision.
1	F. 8 Am.	Good.	Traumatic.	Normal. Cornea .002.	Sept. 4, 1883. Ether. O. D. Iris prolapsed, and was snipped off	30 days.	0.1
2	M. 9 England	Good.	Lamellar.	Normal. Cornea .10.	Sept. 22, 1883. Ether. O. D. Iridectomy for artificial pupil.	10 days.	0.4
3	M. 13 Am.	Good.	Traumatic.	Normal. Cornea .10.	Sept. 22, 1883. No ether. O. S. Discission.	7 days.	$\frac{1}{50}$
4	F. 17	Fair.	Congenital.	Normal. Cornea .010.	Sept. 29, 1883. Ether. O. S. Discission to be repeated.	3 days.	
5	M. 35	Fair.	Traumatic. 5 years.	Normal. Cornea .0115.	Nov. 19, 1883. Ether. Græfe up. O. D.	22 days.	0 2
6	F. 31 Am.	Good.	Mature. 3 years.	Normal. Cornea .011.	Nov. 16, 1883. Ether. Græfe up. O. S.	22 days.	Fingers at 2 M.

7	F.	Good.	Soft. 2 years. Traumatic.	Normal. Cornea .012.	April 8, 1883. Ether. Suction. Pupil contracted, rendering operation difficult. Lens stuff in ant. chamber April 26. Unsuccessful attempt to remove it by paracentesis. Pt. had hysterical attack. Choroidal patches found in eye subsequently.	27 days.	0.4
8	M. 40 Ireland.	Good.	Traumatic. 5 years.	Normal. Cornea .012.	Sept. 13, 1883. Ether. O. S. Græfe up.	16 days.	$\frac{5}{60}$
9	M. 20 Am.	Good.	Traumatic. Chalky and into aut. chamb.	No perception light.	Dec. 13, 1883. Ether. O. D. Græfe up. Removed with difficulty. Finally by forceps. Operation done for relief of other eye, in which were symptoms of sympathetic.		
10	F. 37 N. B.	Fair.	Traumatic. 2 years.	Normal.	Oct. 20, 1883. Ether. O. D. Græfe up. History of injury to this eye twelve years before.	21 days.	$\frac{4}{60}$

FORM OF A BEQUEST

TO THE

INFIRMARY.

I give and bequeath to the Massachusetts Charitable Eye and Ear Infirmary, of Boston, the sum of dollars, to be applied to the uses of said Infirmary.